

Random Activation of Gene Expression (RAGE)

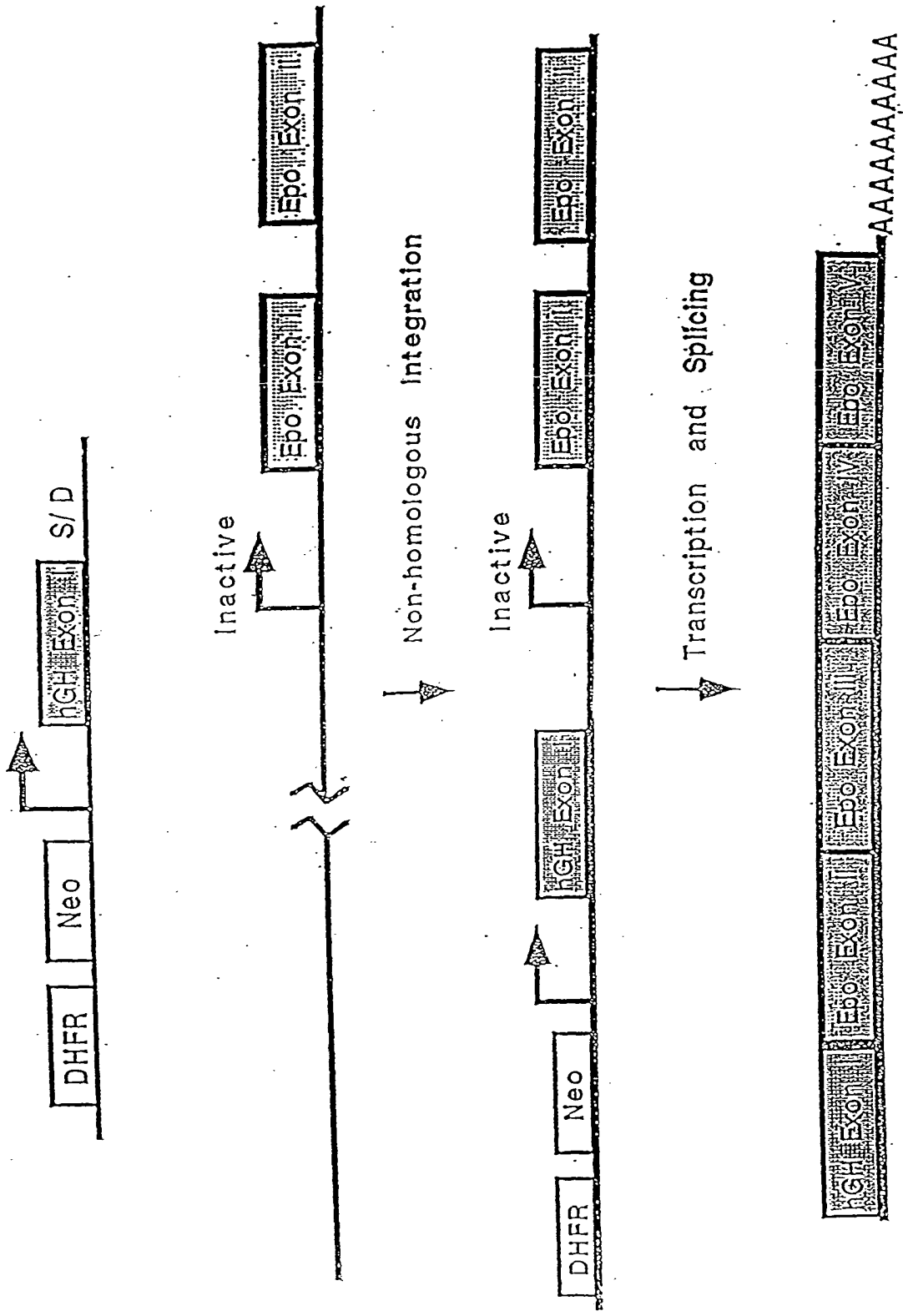
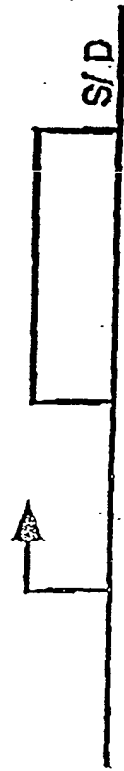


FIGURE 1

Activation Constructs without Translation Start Codons

Construct #



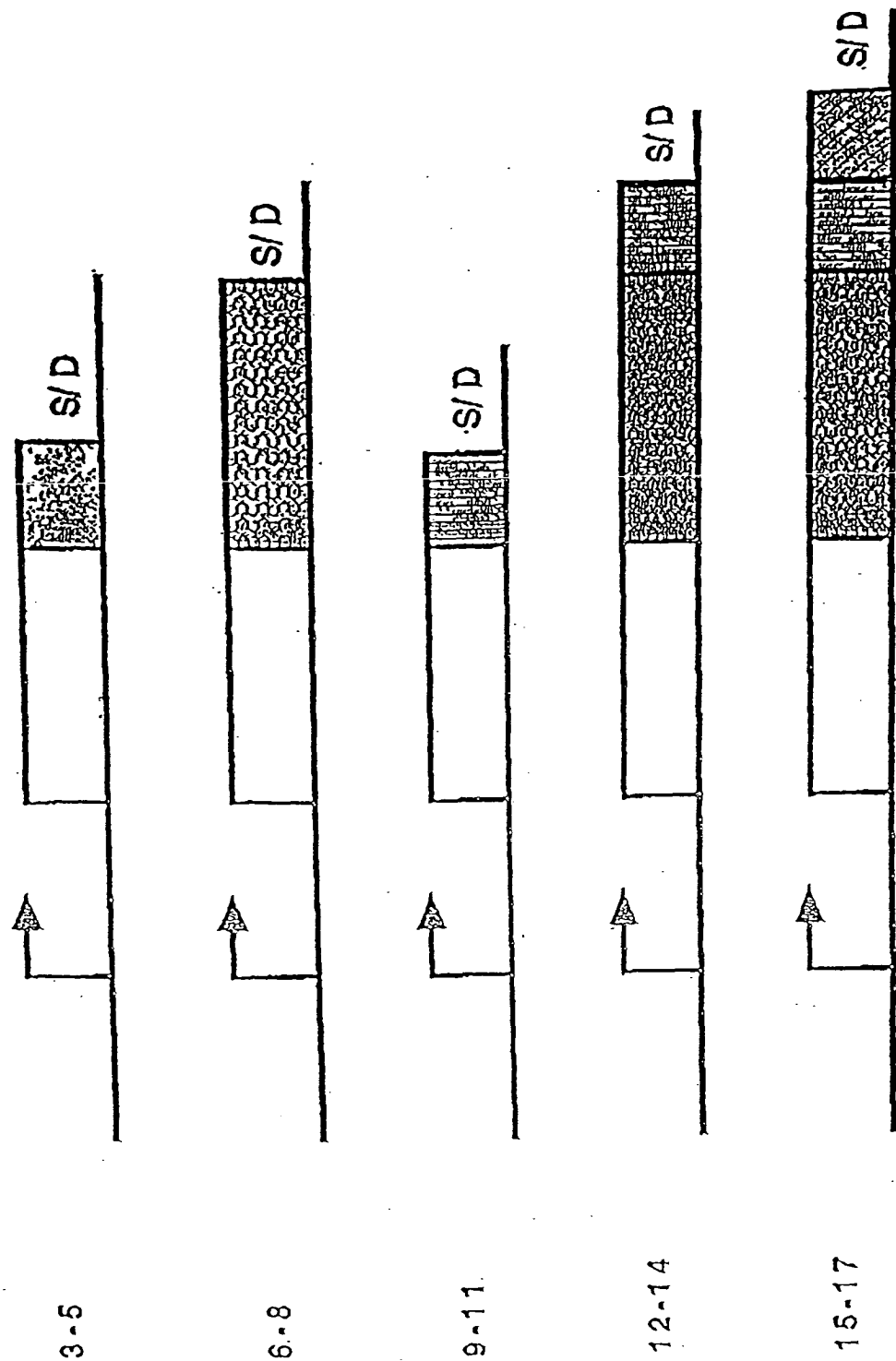
Untranslated

S/D Splice Donor

Fig. 2

Construct #

FIG. 3



Protease Cleavage Site



Secretion Signal



Untranslated



S/D Splice Donor

Epitope Tag



Translated



pRIG-1

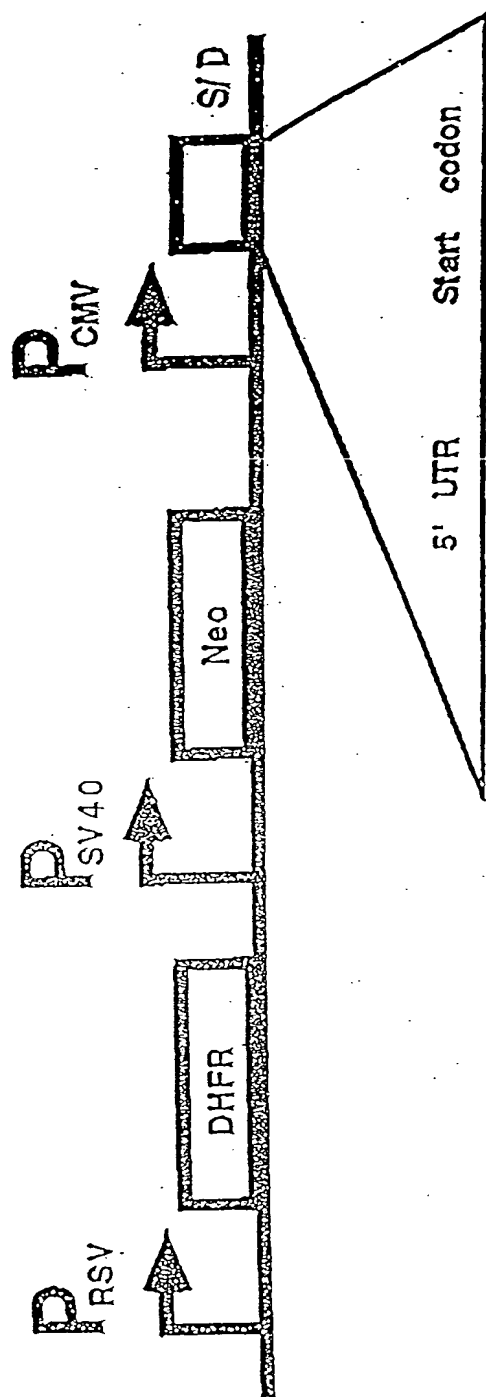


FIG. 4

5'AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
 AATATTGGCTATTGGCCATTGCATA
 CGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACCG
 CCATGTTGGCATTGATTATTGACT
 AGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAGT
 TCCGCGTTACATAACTTACGGTAAA
 TGGCCCGCCTGGCTGACCGCCCAACGACCCCCGCCCATTGACGTCAATAATGACG
 TATGTTCCCATAGTAACGCCAATAG
 GGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGC
 AGTACATCAAGTGTATCATATGCCA
 AGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCC
 AGTACATGACCTTACGGGACTTTCC
 TACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTTTT
 GGCAGTACACCAATGGGCGTGGAT
 AGCGGTTTTGACTCACGGGGATTTCCAAAGTCTCCACCCCATTGACGTCAATGGGAG
 TTTGTTTTGGCACCAAAATCAACGG
 GACTTTCCAAAATGTCTGTAACAACTGCGATCGCCCGCCCCGTTGACGCAAATGGG
 CGGTAGGCGTGTACGGTGGGAGGTC
 TATATAAGCAGAGCTCGTTTGTGAACCGTCAGATCACTAGAAGCTTTATTGCGG
 TAGTTTATCACAGTTAAATTGCTAA
 CGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTT
 AATTAAGTCCACAGTCTCACTTCA
 GTTCCTTTTGCTCCACAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGAA
 TCAAAAAGAGGAAACCAACCCCTAA
 GATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCTT
 CCAAAGGTGCAGTCTCCAAAGAGA
 TTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTCAGGACATCAACTTGGACAT
 TCCTAGTTTTCAAATGAGTGATGAT
 ATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTCA
 GAAAAGAGAAAGAGACTTTCAAGGA
 AAAAGATACATATAAGCTATTTAAAAATGGAAGTCTGAAAATTAAGCATCTGAAG
 ACCGATGATCAGGATATCTACAAGG
 TATCAATATATGATACAAAAGGAAAAAATGTGTTGGAAAAAATATTTGATTTGAA
 GATTCAAGAGAGGGTCTCAAAACCA
 AAGATCTCCTGGACTTGTATCAACACAACCTGACCTGTGAGGTAATGAATGGAA
 CTGACCCCGAATTAACCTGTATCA
 AGATGGGAAACATCTAAACTTTCTCAGAGGGTCATCACACACAAGTGGACCACC
 AGCCTGAGTGCAAAATTCAAGTGCA
 CAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTCAGCTGTCCAG
 AGAAAGGGATCCAGGTGAGTAGGGCC
 CGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTTTAA
 GGAGACCAATAGAACTGGGCTTGT
 CGAGACAGAGAAGACTCTTGCCTTTCTGATAGGCACCTATTGGTCTTACGCGGCC
 GCGAATTCCAAGCTTGAGTATTCTA
 TCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCTGTGTGAA
 ATTGTTATCCGCTCACAAATCCACA
 CAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTGAG
 CTAACCTCACATTAATTGCGTTGCGCGATGCTTCCATTTGTGAGGGTTAATGC-

Figure 5A

TTCGAGAAGACATGATAAGATAACATTGATGAGTTTGGACAAACCACAACAAGAAT
 GCAGTGAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAA
 CCATTATAAGCTGCAATAAACA
 AGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGATGTGG
 GAGGTTTTTTTAAAGCAAGTAAAACC
 TCTACAAATGTGGTAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGAAT
 GGACGCGCCCTGTAGCGGCGCATT
 AGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGCCC
 TAGCGCCCGCTCCTTTTCGCTTTCTTC
 CCTTCCTTTCTCGCCACGTTTCGCGGGCTTTCCCGTCAAGCTCTAAATCGGGGGC
 TCCCTTTAGGGTTCCGATTTAGTGC
 TTTACGGCACCTCGACCCCAAAAAAAGCTGATTAGGGTGATGGTTCACGTAGTGGG
 CCATCGCCCTGATAGACGGTTTTTC
 GCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAACTGG
 AACAACACTCAACCCTATCTCGGT
 TATTCCTTTTGATTTATAAGGGATTTTGCCGATTTTCGGCCTATTGGTTAAAAAATGA
 GCTGATTTAACAATAATTTAACGC
 GAATTTTAACAAAATATTAACGCTTACAATTTTCGCCTGTGTACCTTCTGAGGCGG
 AAAGAACCAGCTGTGGAATGTGTGT
 CAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGC
 ATGCATCTCAATTAGTCAGCAACCAG
 GTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCT
 CAATTAGTCAGCAACCATAGTCCCGC
 CCCTAACTCCGCCATCCCGCCCTAACTCCGCCAGTTCCGCCATTCTCCGCC
 CCATGGCTGACTAATTTTTTTTATT
 TATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAGGA
 GGCTTTTTTGGAGGCCTAGGCTTTTG
 CAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCACCA
 TGATTGAACAAGATGGATTGCACGC
 AGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCGGCTATGACTGGGCACAACAG
 ACAATCGGCTGCTCTGATGCCGCCG
 TGTTCCGGCTGTGACGCGAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTGTC
 CGGTGCCCTGAATGAACTGCAGGAC
 GAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCTTGCGCAGCTGTG
 CTCGACGTTGTCACTGAAGCGGGAAG
 GGAAGTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTT
 GCTCCTGCCGAGAAAGTATCCATCA
 TGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCGA
 CCACCAAGCGAAACATCGCATCGAG
 CGAGCACGTAATCGGATGGAAGCCGGTCTTGTGATCAGGATGATCTGGACGAA
 GAGCATCAGGGGCTCGCGCCAGCCGA
 ACTGTTCCGCCAGGCTCAAGGCGCGCATGCCGACGGCGAGGATCTCGTCGTGAC
 CCATGGCGATGCCTGCTTGCCGAATA
 TCATGGTGGAAAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGT
 GGCGGACCGCTATCAGGACATAGCG
 TTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCTTCC
 TCGTGCTTTACGGTATCGCCGCTCC
 CGATTGCGAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGGGA
 CTCTGGGGTTTCGAAATGACCGACCAAGCGACGCCAACCTGCCATCACGATGGC-

Figure 5B

CGCAATAAAATATCTTTATTTTCATTACATCTGTGTGTTGGTTTTTTGTGTGAAGA.
 TCCGCGTA-
 TGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGAC
 ACCCGCCAACAC
 CCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACAAGC
 TGTGACCGTCTCCGGGAGCTGCATG
 TGTGAGAGGTTTTACCGTCAACCGAAACGCGCGAGACGAAAGGGCCTCGTGA
 TACGCCTATTTTTATAGGTTAATGT
 CATGATAATAATGGTTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGCGC
 GGAACCCCTATTTGTTTTATTTTTCT
 AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCTTCA
 ATAATATTGAAAAAGGAAGAGTATG
 AGTATTCAACATTTCCGTGTCGCCCTTATTCCCTTTTTTGCGGCATTTTGCCTTCC.
 TGTTTTTGCTCACCCAGAAACGCT
 GGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACATCGA
 ACTGGATCTCAACAGCGGTAAGATCC
 TTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTTCT
 GCTATGTGGCGCGGTATTATCCCGT
 ATTGACGCCGGGCAAGAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGACT
 TGGTTGAGTACTCACCAGTCACAGA
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 ATGAGTGATAAACAACGCGGCCAACT
 TACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAACAT
 GGGGGATCATGTAACTCGCCTTGAT
 CGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCAG
 ATGCCTGTAGCAATGGCAACAACGTT
 GCGCAAATCTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAATA
 GACTGGATGGAGGCGGATAAAGTTG
 CAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTTATTGCTGATAAATC
 TGGAGCCGGTGAGCGTGGGTCTCGC
 GGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCT
 ACACGACGGGGAGTCAGGCAACTAT
 GGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGG
 TAACTGTCAGACCAAGTTTACTCAT
 ATATACTTTAGATTGATTTAAACTTTCATTTTTTAATTTAAAAGGATCTAGGTGAAG
 ATCCTTTTTGATAATCTCATGACC
 AAAATCCCTTAACGTGAGTTTTCTGTTCCACTGAGCGTCAGACCCCGTAGAAAAGA
 TCAAAGGATCTTCTTGAGATCCTTT
 TTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAACCACCGCTACCAGCGGTG
 GTTTGTTTGCCGGATCAAGAGCTAC
 CAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATACTGT
 CCTTCTAGTGTAGCCGTAGTTAGGC
 CACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGT
 TACCAGTGGCTGCTGCCAGTGGCGA
 TAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAG
 CGGTGCGGGCTGAACGGGGGGTTCTG
 GCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGC
 GTGAGCTATGAGAAAGCGCCACGCTT
 CCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGG-

Figure 5C

AGAGCGCACGAGGGAGCTTCCAGGGGGAAAACGCCTGGTATCTTTATAGTCCTGTC
GGGTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGG
GGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGGCCTT
TTGCTGGCCTTTTGCTCACATGGCT
CGAC3'

Figure 5D

5'AGATCTTCAATATTGGCCATTAGCCATATTATTTCATTGGTTATATAGCATAAATC
 AATATTGGCTATTGGCCATTGCAT
 ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC
 GCCATGTTGGCATTGATTATTGAC
 TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG
 TTCCGCGTTACATAACTTACGGTAA
 ATGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATTGACGTCAATAATGAC
 GTATGTTCCCATAGTAACGCCAATA
 GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG
 CAGTACATCAAGTGTATCATATGCC
 AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC
 CAGTACATGACCTTACGGGACTTTC
 CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT
 TTGGCAGTACACCAATGGGCGTGGA
 TAGCGGTTTGGACTCACGGGGATTTCGAAGTCTCCACCCCATTGACGTCAATGGGA
 GTTTGTTTTGGCACCAAAATCAACG
 GGACTTTCCAAAATGTCTGTAACAACCTGCGATCGCCCGCCCCGTTGACGCAAATGG
 GCGGTAGGCGTGTACGGTGGGAGGT
 CTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG
 GTAGTTTATCACAGTTAAATTGCTA
 ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGA CTCTCT
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 AGTTCCTTTTGCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGA
 ATCAAAAGAGGAAACCAACCCCTA
 AGATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCT
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 TTCCTAGTTTTTCAAATGAGTGATGA
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 AGAAAAAGAGAAAGAGACTTTCAAGG
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 GACCGATGATCAGGATATCTACAAG
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 AGATTCAAGAGAGGGTCTCAAACCC
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 ACTGACCCCGAATTAAACCTGTATC
 AAGATGGGAAACATCTAAACTTTCTCAGAGGGTTCATCACACACAAGTGGACCAC
 CAGCCTGAGTGCAAAATTCAAGTGC
 ACAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTCAGCTGTCCA
 GAGAAAGGGATCCCAGGTGAGTAGGG
 CCCGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTTT
 AAGGAGACCAATAGAAACTGGGCTT
 GTCGAGACAGAGAAGACTCTTGCCTTTCTGATAGGCACCTATTGGTCTEACGCGG
 CCGCGAATTCCAAGCTTGAGTATTC
 TATCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTGA
 AATTGTTATCCGCTCACAATTCCA
 CACAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGTG
 AGCTAACTCACATTAATTGCGTTGCG
 CGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACATT
 GATGAGTTTGGACAAACCACAACAAGAATGCAGTGAAAAAATGCTTTATTGT-

Figure 6A

GAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAA
CAAGTTAACAACAACAATTGCATTTCATTTTATGTTTCAGGTTTCAGGGGGAGATGT
GGGAGGTTTTTTTAAAGCAAGTAAAA
CCTCTACAAATGTGGTAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGA
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TAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC
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GGCCATCGCCCTGATAGACGGTTTT
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GAGCTGATTTAACAATAAATTTAAC
GCGAATTTTAACAATAAATTTAACGCTTACAATTTTCGCTGTGTACCTTCTGAGGC
GGAAAGAACCAGCTGTGGAATGTGT
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GCATGCATCTCAATTAGTCAGCAACC
AGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCAT
CTCAATTAGTCAGCAACCATAGTCCC
GCCCCTAATCCGCCCATCCCGCCCTAACTCCGCCAGTTCCGCCATTCTCCG
CCCCATGGCTGACTAATTTTTTTTA
TTTATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAGG
AGGCTTTTTTTGGAGGCCCTAGGCTTT
TGCAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCAC
CATGATTGAACAAGATGGATTGCAC
GCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAAC
AGACAATCGGCTGCTCTGATGCCGC
CGTGTTCCGGCTGTGACGCGAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCTG
TCCGGTGCCCTGAATGAACTGCAGG
ACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCTTGTGCGCAGCTG
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TTGCTCCTGCCGAGAAAGTATCCAT
CATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTCT
GACCACCAAGCGAAACATCGCATCG
AGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTGCGATCAGGATGATCTGGACG
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TATCATGGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGGT
GTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGC
TTGGCGGCGAATGGGCTGACCGCTTCTCTGTGCTTTACGGTATCGCCGCT
CCCGATTGCGCAGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCGG
GACTCTGGGGTTTCAAATGACCGAC
CAAGCGACGCCCAACCTGCCATCACGATGGCCGCAATAAAATATCTTTATTTTCA
TTACATCTGTGTGTTGGTTTTTTGT
GTGAAGATCCGCGTATGGTGCATCTCAGTACAATCTGCTCTGATGCCGCATAGT
TAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCGCCCTGACGGGGCT-

Figure 6B

TGTCTGCTCCCGGCATCCGCTTACAGACAAGCTGTGACCGTCTCCGGGAGCTGCA
 TGTGTCAGAGGTTTTACCGTCATCACCGAAACGCGCGAGACGAAAGGGCCTCGT
 GATACGCCTATTTTTATAGGTTAAT
 GTCATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGC
 GCGGAACCCCTATTTGTTTATTTT
 CTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCCTGATAAATGCTT
 CAATAATATTGAAAAAGGAAGAGTA
 TGAGTATTCAACATTTCCGTGTGCGCCCTTATTECCCTTTTTTGCGGCATTTTGCCTT
 CCTGTTTTTGCTCACCCAGAAACG
 CTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACATC
 GAACTGGATCTCAACAGCGGTAAGAT
 CCTTGAGAGTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGTT
 CTGCTATGTGGCGCGGTATTATCCC
 GTATTGACGCCGGGCAAGAGCAACTCGGTGCGCGCATACACTATTCTCAGAATGA
 CTTGGTTGAGTACTCACCAGTCACA
 GAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCEATAA
 CCATGAGTGATAACACTGCGGCCAA
 CTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGACACAAC
 ATGGGGGATCATGTAACCTCGCCTTG
 ATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCA
 CGATGCCTGTAGCAATGGCAACAACG
 TTGCGCAAACCTATTAACCTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTAA
 TAGACTGGATGGAGGCGGATAAAGT
 TGCAAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAAA
 TCTGGAGCCGGTGAGCGTGGGTCTC
 GCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTAT
 CTACACGACGGGGAGTCAGGCAACT
 ATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATT
 GGTAACCTGTCAGACCAAGTTTACTC
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 AGATCCTTTTTTGATAATCTCATGA
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 TGGTTTGTGTTGCCGGATCAAGAGCT
 ACCAACTCTTTTTCCGAAGGTAACCTGGCTTCAGCAGAGCGCAGATACCAAATACT
 GTCCCTTCTAGTGTAGCCGTAGTTAG
 GCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCT
 GTTACCAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTTGGACTCA
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 GTGCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACTACA
 GCGTGAGCTATGAGAAAGCGCCACGC
 TTCCCGAAGGGAGAAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAG
 GAGAGCGCACGAGGGAGCTTCCAGGG
 GGAAACGCCTGGTATCTTTATAGTCCTGTGCGGGTTTCGCCACCTCTGACTTGAGC
 GTCGATTTTTGTGATGCTCGTCAGG
 GGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCCTTTTACGGTTCCTGGC
 CTTTTGCTGGCCTTTTGCTCACATGG
 CTCGAC3'

Figure 6C

5'AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATC
 AATATTGGCTATTGGCCATTGCAT
 ACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAATATGACC
 GCCATGTTGGCATTGATTATTGAC
 TAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATATATGGAG
 TTCCGCGTTACATAACTTACGGTAA
 ATGGCCCGCCTGGCTGACCGCCCAACGACCCCGCCCATTGACGTCAATAATGAC
 GTATGTTCCCATAGTAACGCCAATA
 GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGG
 CAGTACATCAAGTGTATCATATGCC
 AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCC
 CAGTACATGACCTTACGGGACTTTC
 CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTGATGCGGTT
 TTGGCAGTACACCAATGGGCGTGGA
 TAGCGGTTTGACTCACGGGGATTTCCTCAAGTCTCCACCCCATTGACGTCAATGGGA
 GTTTGTTTTGGCACCAAAATCAACG
 GGACTTTCCAAAATGTCTGTAACAACTGCGATCGCCCGCCCGTTGACGCAAATGG
 GCGGTAGGCGTGTACGGTGGGAGGT
 CTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG
 GTAGTTTATCACAGTTAAATTGCTA
 ACGCAGTCAGTGCTTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGACTCTCT
 TAATTAACCTCCACCAGTCTCACTTC
 AGTTCCTTTTGCCTCCACCAGTCTCACTTCAGTTCCTTTTGCATGAAGAGCTCAGA
 ATCAAAAGAGGAAACCAACCCCTA
 AGATGAGCTTTCCATGTAAATTTGTAGCCAGCTTCCTTCTGATTTTCAATGTTTCT
 TCCAAAGGTGCAGTCTCCAAAGAG
 ATTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTCAGGACATCAACTTGGACA
 TTCCTAGTTTTCAAATGAGTGATGA
 TATTGACGATATAAAATGGGAAAAAACTTCAGACAAGAAAAAGATTGCACAATTC
 AGAAAAAGAGAAAGAGACTTTCAAGG
 AAAAAGATACATATAAGCTATTTAAAAATGGAACCTCTGAAAATTAAGCATCTGAA
 GACCGATGATCAGGATATCTACAAG
 GTATCAATATATGATACAAAAGGAAAAAAATGTGTTGGAAAAAATATTTGATTTGA
 AGATTCAAGAGAGGGTCTCAAAACC
 AAAGATCTCCTGGACTTGTATCAACACAACCCTGACCTGTGAGGTAATGAATGGA
 ACTGACCCCGAATTAAACCTGTATC
 AAGATGGGAAACATCTAAAACCTTCTCAGAGGGTCATCACACACAAGTGGACCAC
 CAGCCTGAGTGCAAAATTCAAGTGC
 ACAGCAGGGAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTCAGCTGTCCA
 GAGAAAGGGATCCACAGGTGAGTAGG
 GCCCGATCCTTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTT
 TAAGGAGACCAATAGAAACTGGGCT
 TGTCGAGACAGAGAAGACTCTTGCGTTTCTGATAGGCACCTATTGGTCTTACGCG
 GCCGCGAATTCCAAGCTTGAGTATT
 CTATCGTGTACCTAAATAACTTGGCGTAATCATGGTCATATCTGTTTCCTGTGTG
 AAATTGTTATCCGCTCACAATTCC
 ACACAACATACGAGCCGGAAGCATAAAGTGTAAGCCTGGGGTGCCTAATGAGT
 GAGCTAACTCACTAATTGCGTTGC
 GCGATGCTTCCATTTTGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACAT
 TGATGAGTTTGGACAAACCACAACA AGAATGCAGTGAAAAAAATGC-

Figure 7A

TTTATTTGTGAAATTTGTGATG
 CTATTGCTTTTATTTGTAAACCATTATAAGCTGCAATAA
 ACAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTTTCAGGGGGAGATG
 TGGGAGGTTTTTTTAAAGCAAGTAAA
 ACCTCTACAAATGTGGTAAAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCG
 AATGGACGCGCCCTGTAGCGGCGCA
 TTAAGCGCGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGC
 CCTAGCGCCCGCTCCCTTCGCTTTC
 TTCCCTTCCTTTCTCGCCACGTTCCGCCGGCTTTCCCGTCAAGCTCTAAATCGGGG
 GCTCCCTTTAGGGTTCCGATTTAG
 TGCTTTACGGCACCTCGACCCCAAAAACCTTGATTAGGGTGATGGTTTACGTAGT
 GGGCCATCGCCCTGATAGACGGTTT
 TTCGCCCTTTGACGTTGGAGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACT
 GGAACAACACTCAACCCTATGTCG
 GTCTATTCTTTTGATTATAAGGGATTTTGCCGATTTCCGGCCTATTGGTTAAAAAA
 TGAGCTGATTTAACA AAAAATTTAA
 CGCGAATTTTAACAAAATATTAACGCTTACAATTTTCGCCTGTGTACCTTCTGAGG
 CGGAAAGAACCAGCTGTGGAATGTG
 TGTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAA
 AGCATGCATCTCAATTAGTCAGCAAC
 CAGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCA
 TCTCAATTAGTCAGCAACCATAGTCC
 CGCCCCTAACCTCCGCCCATCCCGCCCCCTAACTCCGCCCAGTTCCGCCCATTTCTCC
 GCCCATGGCTGACTAATTTTTTTT
 ATTTATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTATTCCAGAAGTAGTGAG
 GAGGCTTTTTTTGGAGGCCCTAGGCTT
 TTGCAAAAAGCTTGATTCTTCTGACACAACAGTCTCGAACTTAAGGCTAGAGCCA
 CCATGATTGAACAAGATGGATTGCA
 CGCAGGTTCTCCGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAA
 CAGACAATCGGCTGCTCTGATGCCG
 CCGTGTTCGGGCTGTGACGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGACCT
 GTCCGGTGCCCTGAATGAACTGCAG
 GACGAGGCAGCGCGGCTATCGTGGCTGGCCACGACGGGCGTTCCCTTGCGCAGCT
 GTGCTCGACGTTGTCACTGAAGCGGG
 AAGGGACTGGCTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCAC
 CTTGCTCCTGCCGAGAAAGTATCCA
 TCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGGCCATT
 CGACCACCAAGCGAAACATCGCATC
 GAGCGAGCACGTA CTGGATGGAAGCCGGTCTTGTCGATCAGGATGATCTGGAC
 GAAGAGCATCAGGGGCTCGCGCCAGC
 CGAACTGTTCCGCCAGGCTCAAGGCGCGCATGCCCGACGGCGAGGATCTCGTCGT
 GACCCATGGCGATGCCTGCTTGCCGA
 ATATCATGGTGGAAAATGGCCGCTTTTCTGGATTCATCGACTGTGGCCGGCTGGG
 TGTGGCGGACCGCTATCAGGACATA
 GCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGCTGACCGCT
 TCCTCGTGCTTTACGGTATCGCCG
 TCCCGATTTCGACGCGCATCGCCTTCTATCGCCTTCTTGACGAGTTCTTCTGAGCG
 GGA CTCTGGGGTTTCGAAATGACCGA
 CCAAGCGACGCCCAACCTGCCATCACGATGGCCGCAATAAAATATCTTTATTTTC
 ATTACATCTGTGTGTTGGTTTTTTGTGTGAAGATCCGCGTATGGTGCACTCTC-

Figure 7B

AGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAA
 CACCCGCTGACGCGCCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGACA
 AGCTGTGACCGTCTCCGGGAGCTGC
 ATGTGTCAGAGGTTTTACCGTCATCACCGAAACGCGCGAGACGAAAGGGCCTCG
 TGATACGCCTATTTTTATAGGTTAA
 TGTCATGATAATAATGGTTTCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTG
 CGCGGAACCCCTATTTGTTTATTTT
 TCTAAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCTGATAAATGCT
 TCAATAATATTGAAAAAGGAAGAGT
 ATGAGTATTCAACATTTCCGTGTCGCCCTTATTCCTTTTTTTCGGGCATTTTGCCT
 TCCTGTTTTTGTCTACCCAGAAAC
 GCTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGGTACAT
 CGAACTGGATCTCAACAGCGGTAAGA
 TCCTTGAGAGTTTTTCGCCCCGAAGAACGTTTTCCAATGATGAGCACTTTTAAAGT
 TCTGCTATGTGGCGCGGTATTATCC
 CGTATTGACGCGGGCAAGAGCAACTCGGTGCGCCGCATACACTATTCTCAGAATG
 ACTTGGTTGAGTACTCACCAGTCAC
 AGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATA
 ACCATGAGTGATAACACTGCGGCCA
 ACTTACTTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTTTGCACAA
 CATGGGGGATCATGTAACTCGCCTT
 GATCGTTGGGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACC
 ACGATGCCTGTAGCAATGGCAACAAC
 GTTGCGCAAACTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAATTA
 ATAAGACTGGATGGAGGCGGATAAAG
 TTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCTGGCTGGTTTATTGCTGATAA
 ATCTGGAGCCGGTGAGCGTGGGTCT
 CGCGGTATCATTGCAGCACTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTA
 TCTACACGACGGGGAGTCAGGCAAC
 TATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCAT
 TGGTAACTGTCAGACCAAGTTTACT
 CATATATACTTTAGATTGATTTAAAACTTCATTTTTTAATTTAAAAGGATCTAGGTG
 AAGATCCTTTTTTGATAATCTCATG
 ACCAAAATCCCTTAACGTGAGTTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAA
 AGATCAAAGGATCTTCTTGAGATCC
 TTTTTTCTGCGCGTAATCTGCTGCTTGCAAACAAAAAAACCACCGCTACCAGCG
 GTGGTTTGTGTTGCCGGATCAAGAGC
 TACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAATAC
 TGTCCTTCTAGTGTAGCCGTAGTTA
 GGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCC
 TGTTACCAGTGGCTGCTGCCAGTGG
 CGATAAGTCGTGTCTTACCGGGTTGGACTCAAGACGATAGTTACCGGATAAGGCG
 CAGCGGTCGGGCTGAACGGGGGGTT
 CGTGACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTAC
 AGCGTGAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGT
 ATCCGGTAAGCGGCAGGGTCGGAACAGGAGAGCGCACGAGGGAGCTTCCAGG
 GGGAAACGCCTGGTATCTTTATAGTCCTGTGCGGTTTCGCCACCTCTGACTTGAG
 CGTCGATTTTTGTGATGCTCGTCAG
 GGGGGCGGAGCCTATGGAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCTGG
 CCTTTTGCTGGCCTTTTGCTCACATGGCTCGAC3'

Figure 7C

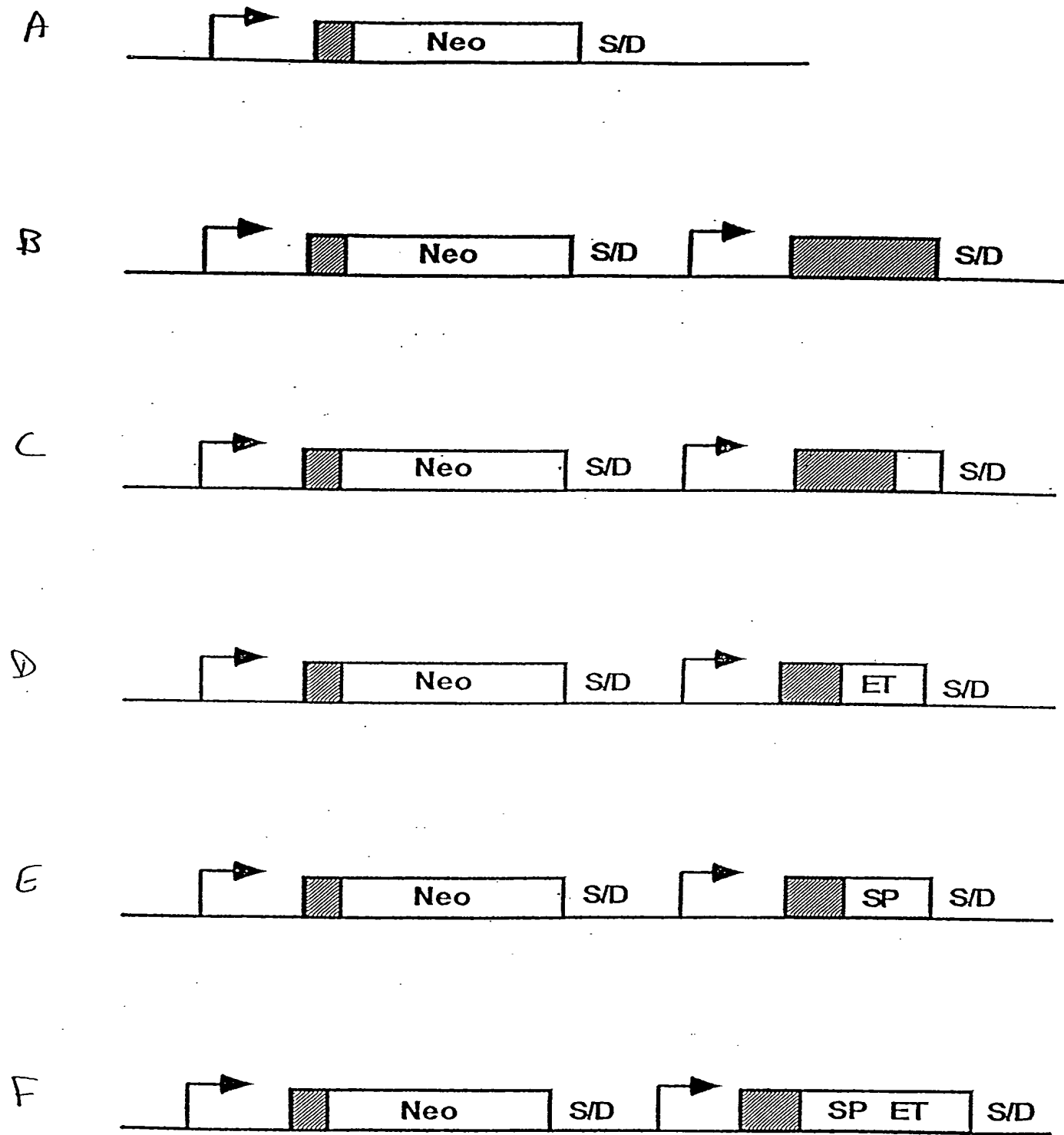


FIGURE 8

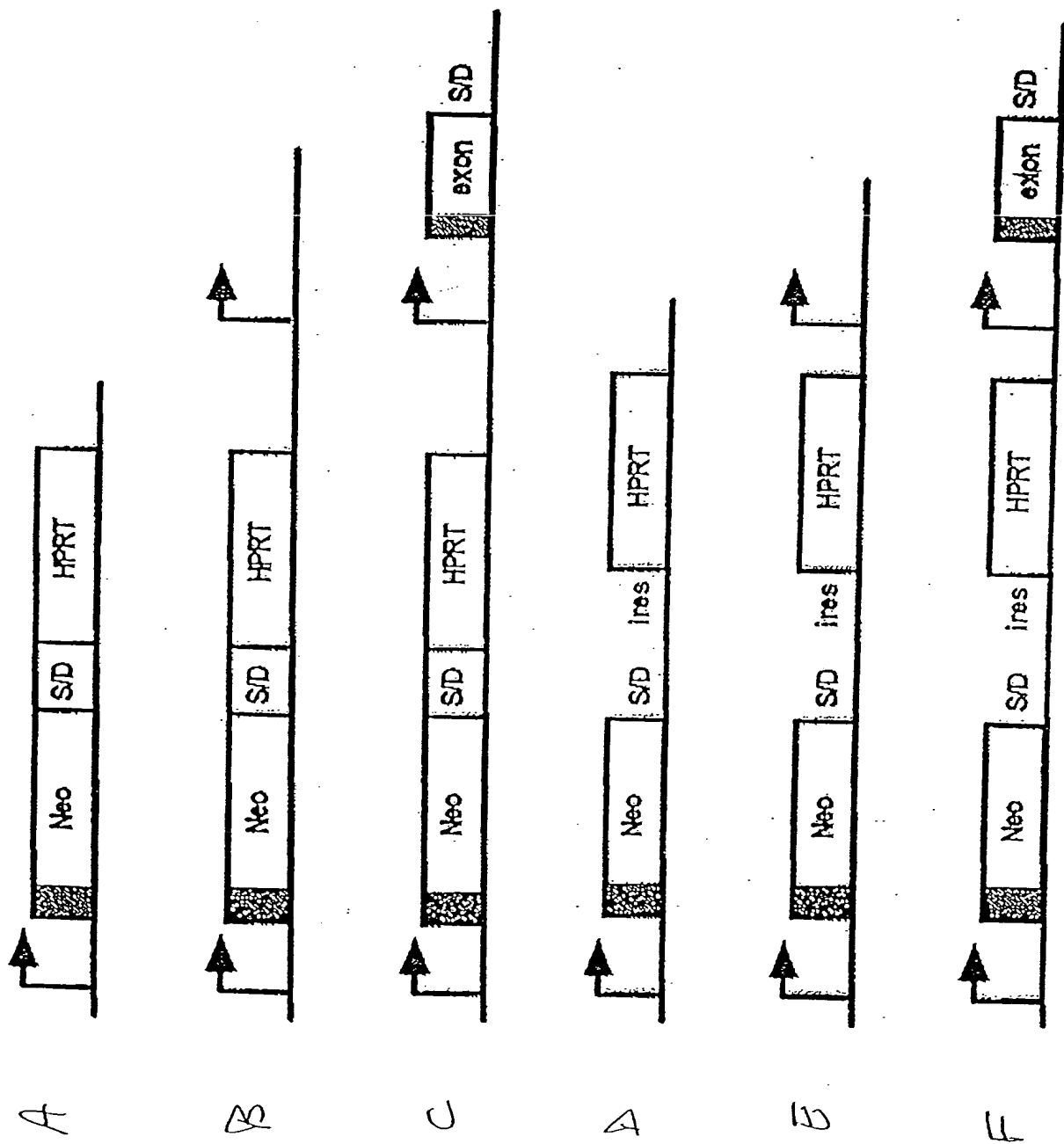


FIGURE 9

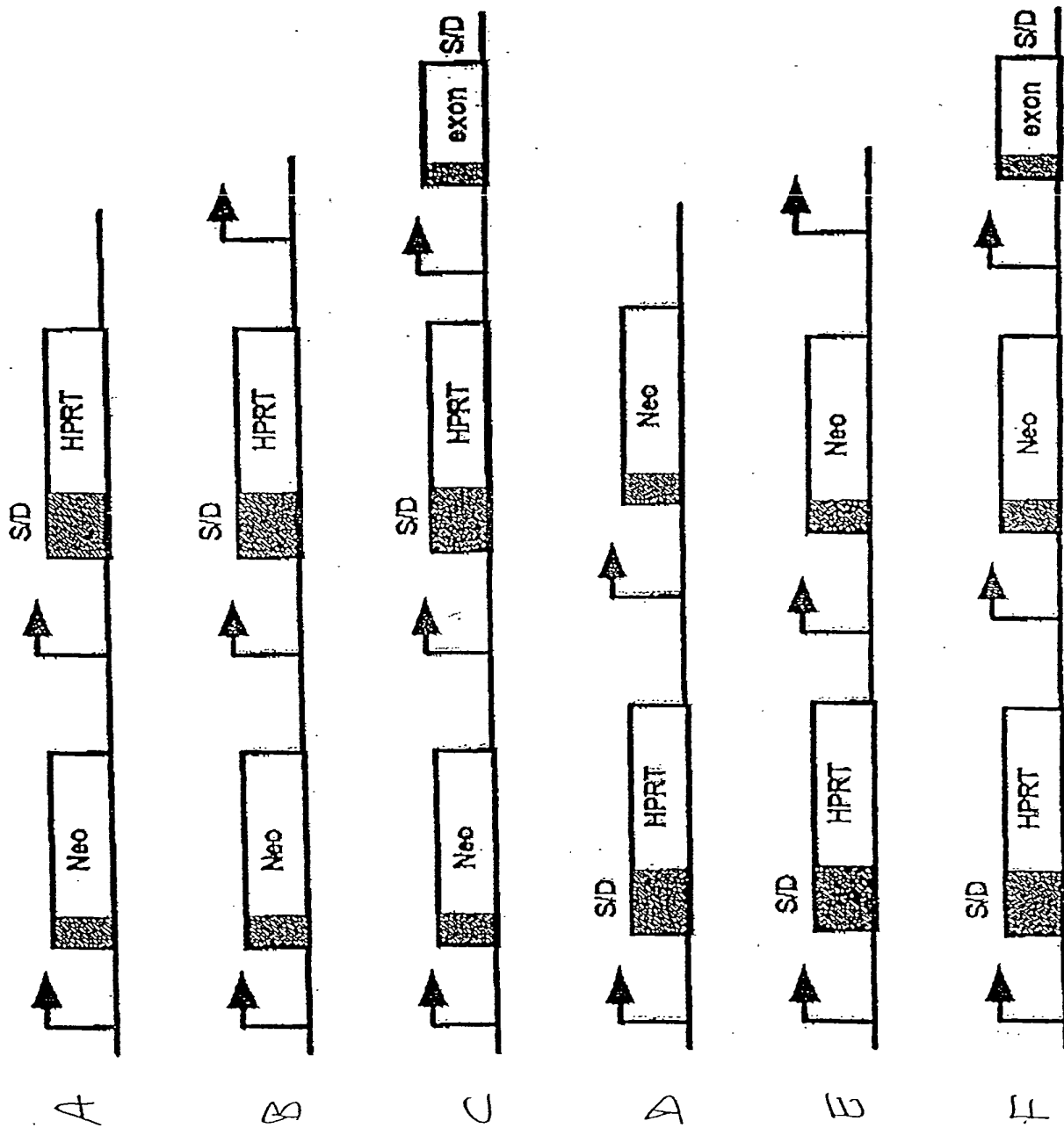


FIGURE 10



FIGURE 11

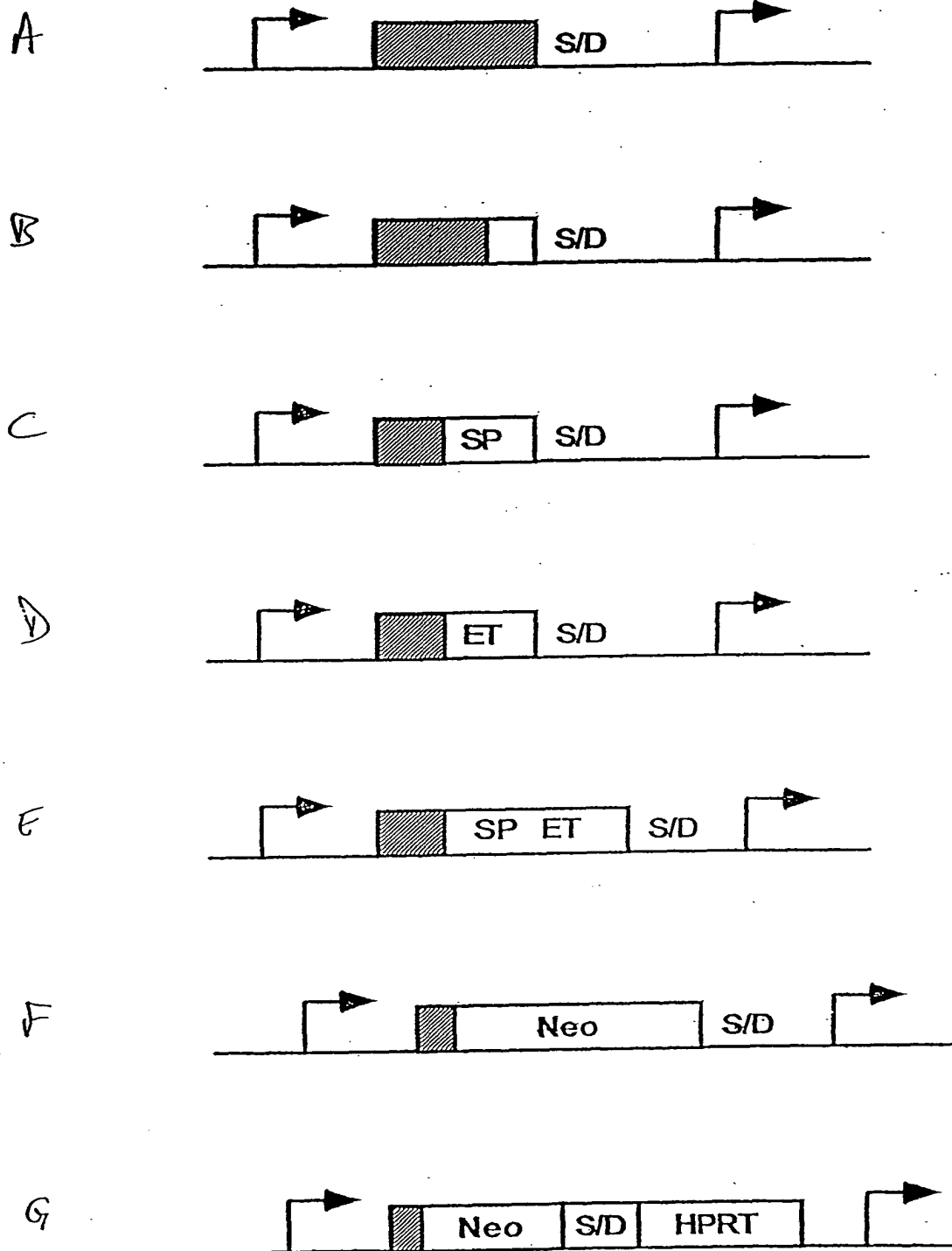


FIGURE 12

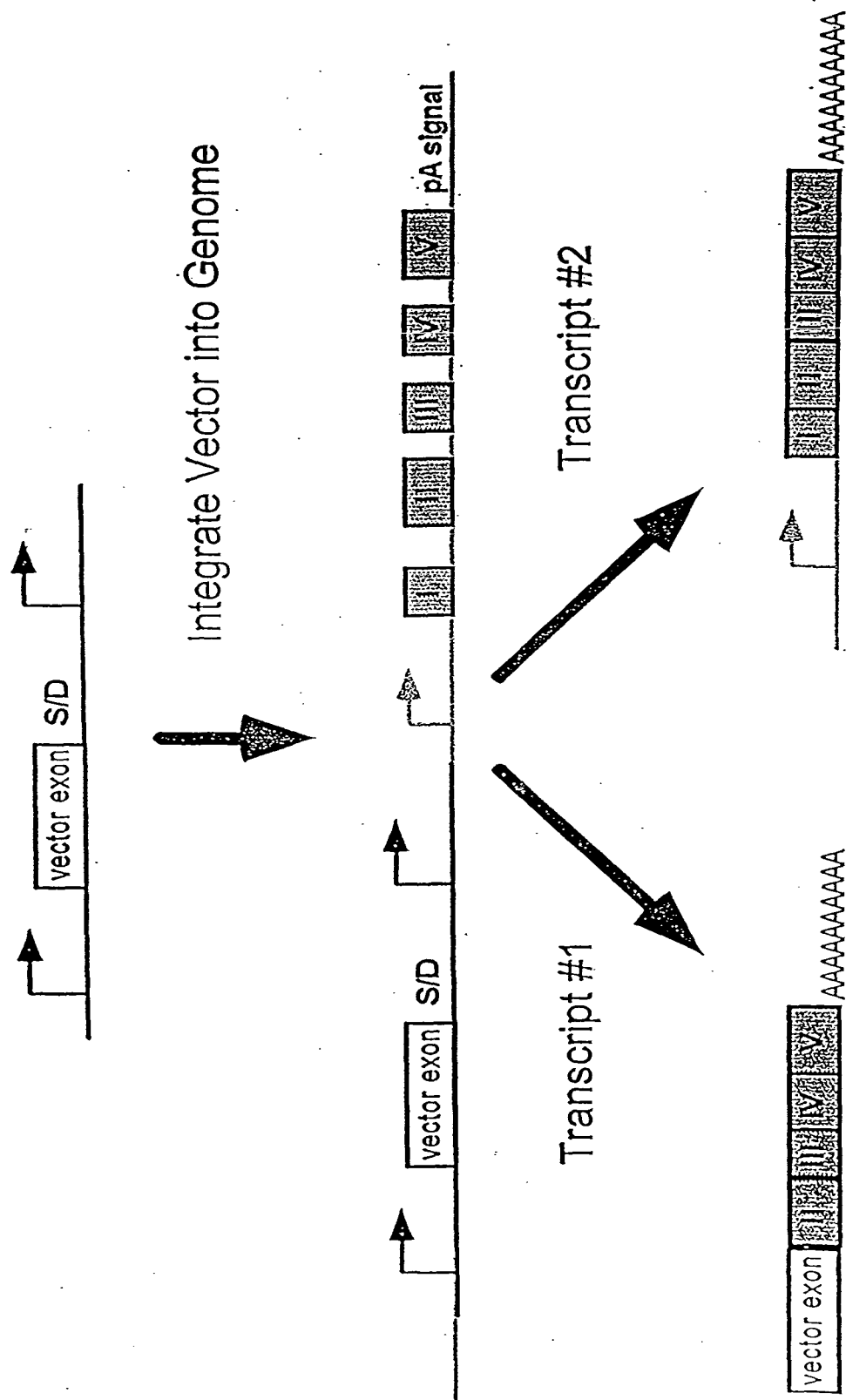


FIGURE 13

AGATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAATCAATATTGG
CTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCA
ATATGACCGCCATTGTTGGCATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCA
TTAGTTCATAGCCCATATATGGAGTTCCGCGTTACATAAATTACGGTAAATGGCCCCGCTGGC
TGACCGCCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCA
ATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCACTTGGCAGTA
CATCAAGTGTATCATATGCCAAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCCGCC
TGGCATTATGCCCAGTACATGACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTA
GTCATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCGGTTT
GACTCACGGGGATTTCCAAAGTCTCCACCCCATTTGACGTCAATGGGAGTTTGTTTTGGCACCAA
AATCAACGGGACTTTCCAAAATGTCTGAACAACCTGCGATCGCCCGCCCCGTTGACGCAAATG
GGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGAT
CACTAGAAGCTTTATTGCGGTAGTTTATCACAGTTAAATTGCTAACGCAGTCAGTGTCTCTGA
CACAAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTTAAATccaccatggctacaggtagtactcgGATCTA
GGCTATATGCGTTGATGCAATTTCTATGCGCACCCGTTCTCGGAGCACTGTCCGACCGCTTT
GGCCGCGCCAGTCTGCTGCTGCTTCTGCTACTTGGAGCCACTATCGACTACGCGATCATGGCG
ACCACACCCGTCCTGTGGATCCTCTACGCCGGACGCATCGTGGCCGGCATCACCGGCGCCACA
GGTGCAGTTGCTGGCGCTATATCGCCGACATCACCGATGGGGAAGATCGGGCTCGGCACTTC
GGGCTCATGAGCGCTTGTTCGGCTCTCTTAAGGTAGCAGATCCTTGCTAGAGTCCGACCAATT
CTCATGTTTGACAGCTTATCATCGCAGATCCTGAGCTTGTATGGTGCACCTCTCAGTACAATCT
GCTCTGCTGCCGCATAGTTAAGCCAGTATCTGCTCCCTGCTTGTGTGTTGGAGTCTGATGAT
AGTGCAGCAGCAAAATTTAAGCTACAACAAGGCAAGGCTTGACCGACAATTGCATGAAGAAT
CTGCTTAGGGTTAGGCGTTTTGCGCTGCTTCGCGATGTACGGGCCAGATATACGCGTATCTGA
GGGACTAGGGTGTGTTTAGGCGCCCAGCGGGGCTTCGGTTGTACGCGGTTAGGAGTCCCCTC
AGGATATAGTAGTTTCGCTTTTGCATAGGGAGGGGGAAATGTAGTCTTATGCAATACACTTGT
AGTCTTGCAACATGGTAACGATGAGTTAGCAACATGCCTTACAAGGAGAGAAAAAGCACCGT
GCATGCCGATTGGTGGAAGTAAGGTGGTACGATCGTGCCTTATTAGGAAGGCAACAGACAGG
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AGCTCGATACAATAAACGCCATTTGACCATTACCACATTGGTGTGCACCTCCAAGCTGGGTA
CCAGCTGCTAGCCTCGAGACGCGTGATTTCCCTTCGAAGCTTgtcatggttggttcgctaaactgcatcgctgctgtc
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tgagaagaatgattaatCGATCTTAAGTTTAATCTTTCCCGGGGGTACCGTCGACTGCGGGCCGCAATTC
CAAGCTTGAGTATTCTATCGTGTACCTAAATAACTTGGCGTAATCATGGTTCATATCTGTTTCC
TGTGTGAAATTGTTATCCGCTCACAATTCACACAACATACGAGCCGGAAGCATAAAGTGTA
AAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCGATGCTTCCATTT
TGTGAGGGTTAATGCTTCGAGAAGACATGATAAGATACATTGATGAGTTTGGACAAACCACA
ACAAGAATGCAGTGAAAAAAATGCTTTATTTGTGAAATTTGTGATGCTATTGCTTTATTTGTA
ACCATTATAAGCTGCAATAAACAAAGTTAACAACAACAATTGCATTCATTTTATGTTTCAGGTT
CAGGGGGAGATGTGGGAGGTTTTTTAAAGCAAGTAAAACCTCTACAAATGTGGTAAAATCCG
ATAAGGATCGATTCCGGAGCCTGAATGGCGAATGGACGCGCCCTGTAGCGGGCGCATTAAAGCG
CGGCGGGTGTGGTGGTTACGCGCACGTGACCGCTACACTTGCCAGCGCCCTAGCGCCCCGCTCC
TTTCGCTTTCTTCCCTTCTCGCCACGTTCCCGGCTTTCCCCGTCAAGCTCTAAATCGG
GGGCTCCCTTTAGGGTTCCGATTTAGTCTTTACGGCACCTCGACCCCAAAAAAATTGATTAG
GGTGTGAGTTTACGTFAGTGGGCCATCGCCCTGATAGACGGTTTTTTCGCCCTTTGACGTTGGAG
TCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACCTGGAACAACACTCAACCCTATCTCGGTC
TATTCTTTTGAATTTATAAGGGATTTTGGCGATTTTCGGCCTATTGGTTAAAAAATGAGCTGATTT
AACAAAAATTTAACGCGAATTTTAAACAAAATATTAACGCTTACAATTTTCGCCTGTGTACCTTC
TGAGGCGGAAAGAACCAGCTGTGGAATGTGTGTGAGTTAGGGTGTGGAAAGTCCCCAGGCTC
CCCAGCAGGCAGAAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAGGTGTGGAAAGT
CCCCAGGCTCCCCAGCAGGCAGAAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCATA-

FIGURE 14A

GTCCCGCCCCCTAACTCCGCCCCATCCCGCCCCCTAACTCCGCCCCAGTTCCGCCCCATTCTCCGCCCC
 ATGGCTGACTAATTTTTTTTATTTATGTCAGAGGCGGAGGCGGCTCGGCTCTGAGCTATTCC
 AGAAGTAGTGAGGAGGCTTTTTTGGAGGGCCTAGGCTTTTGCAAAAAGCTTGATTCCTTCTGACA
 CAACAGTCTCGAACTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCAACGCAGGTT
 CTCGGGCCGCTTGGGTGGAGAGGCTATTCCGGCTATGACTGGGCACAAACAGACAATCCGGCTGC
 TCTGATGCCGGCCGTGTCCGGCTGTGACGCGCAGGGGCGCCCGGTTCTTTTTGTCAAGACCGAC
 CTGTCCGGTGCCCTGAATGAACTGCAGGACGAGGCGAGCGCGGCTATCGTGGCTGGCCACGAC
 GGGCGTTCCCTTGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGGCTGCTATT
 GGGCGAAGTGCCGGGGCAGGATCTCCTGTCTCTCACCTTGCTCCTGCCGAGAAAGTATCCAT
 CATGGCTGATGCAATGCGGGCGGCTGCATAACGCTTGATCCGGCTACCTGCCATTCCGACCACCA
 AGCGAAACATCGCATCGAGCGAGCACGTAACGGATGGAAGCCGGTCTTGTCGATCAGGATG
 ATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACTGTTCCGCCAGGCTCAAGGCGCGC
 ATGCCCGACCGCGAGGATCTCGTCTGTGACCCATGGCGATGCCGTGCTTGCCGAATATCATGGTG
 GAAAATGGCCGCTTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCTATCAG
 GACATAGCGTTGGCTACCCGCTGATATTGCTGAAGAGCTTGCGCGCGAATGGGCTGACCGCTTC
 CTCTGCTTTTACGGTATCGCCGCTCCCGATTCCGAGCGCATCGCCTTCTATCGCCTTCTTGACG
 AGTTCTTCTGAGCGGGACTCTGGGGTTGAAAATGACCGACCAAGCGACGCCAACCTGCCAT
 CACGATGGCCGCAATAAAATATCTTTATTTTACATCTGTGTGTGGTTTTTTGTGGGAAG
 ATCCGCGTATGGTGCACCTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGA
 CACCCGCCAACACCCGCTGACCGCGCCTGACGGGCTTGTCTGCTCCCGGCATCCGCTTACAGA
 CAAGCTGTGACCGTCTCCGGGAGCTGCATGTGTGAGAGGTTTTTACCCTCATCACCGAAACGC
 GCGAGACGAAAGGGCCTCGTGATAACGCTATTTTTATAGGTTAATGTCATGATAATAATGGTT
 TCTTAGACGTCAGGTGGCACTTTTCGGGGAAATGTGCGCGGAACCCCTATTTGTTTATTTTTCT
 AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCCTGATAAATGCTTCAATAATATT
 GAAAAAGGAAGAGTATGAGTATTCAACATTTCCGTGTCCGCTTATCCCTTTTTTTCGGGCAT
 TTTGCCCTTCTGTTTTTGTCTACCCAGAAACGCTGGTGAAAGTAAAGATGCTGAAGATCAGT
 TGGGTGCACGAGTGGGTTACATCGAACTGGATCTCAACAGCGGTAAGATCCTTGAGAGTTTTT
 GCCCCGAAGAAGCTTTTCCAATGATGAGCACTTTTAAAGTTCTGCTATGTGGCGCGGTATTAT
 CCGGTATTGACGCCGGGCAAGAGCAACTCGGTCCGGCATACTATTCTCAGAAATGACTTGG
 TTGAGTACTCACAGTCCAGAAAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGC
 AGTGCTGCCATAACCATGAGTGATAACACTGCGGCCAACTTACTTCTGACAACGATCCGAGG
 ACCGAAGGAGCTAACCGCTTTTTTGCACAACATGGGGGATCATGTAACCTCGCCTTGATCGTTG
 GGAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCACGATGCCTGTAGCAA
 TGGCAACAACGTTGCGCAAACTATTAAGTGGCGAACTACTTACTCTAGCTTCCCGGCAACAAT
 TAATAGACTGGATGGAGGCGGATAAAGTTGCAGGACCACTTCTGCGCTCGGCCCTTCCGGCT
 GGCTGGTTTATTGCTGATAAATCTGGAGCCGGTGAGCGTGGGTCTCGCGGTATCATTGCAGCA
 CTGGGGCCAGATGGTAAGCCCTCCCGTATCGTAGTTATCTACACGACGGGGAGTCAGGCAAC
 TATGGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAAGCATTGGTAAC
 TGTCAGACCAAGTTTACTCATATATACTTTAGATTGATTTAAACCTTCATTTTTAATTTAAAG
 GATCTAGGTGAAGATCCTTTTTGATAATCTCATGACCAAAATCCCTTAACGTGAGTTTTTCGTT
 CCACTGAGCGTCAGACCCCGTAGAAAAGATCAAAAGGATCTTCTTGAGATCCTTTTTTCTGCG
 CGTAATCTGCTGCTTGCAAAACAAAAAACACCGCTACCAGCGGTGGTTTGTGTTGCCGGATCA
 AGAGCTACCAACTCTTTTTCCGAAGGTAAGTGGCTTCAGCAGAGCGCAGATACCAAACTACTGT
 CCTTCTAGTGTAGCCGTAGTTAGGCCACCACTTCAAGAACTCTGTAGCACCGCCTACATACCT
 CGCTCTGCTAATCCTGTTACCAAGTGGCTGCTGCCAGTGGCGATAAGTCGTGTCTTACCGGGTT
 GGACTCAAGACGATAGTTACCGGATAAGGCGCAGCGGTCGGGCTGAACGGGGGGTTCTGTGA
 CACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTACAGCGTGAGCTATGA
 GAAAGCGCCACGCTTCCCGAAGGGAGAAAGGCGGACAGGTATCCGGTAAGCGGCAGGGTCG
 GAACAGGAGAGCGCACGAGGGAGCTTCCAGGGGGAAACGCCTGGTATCTTTATAGTCTCTGTC
 GGGTTTTCGCCACCTCTGACTTGAGCGTCGATTTTTGTGATGCTCGTCAGGGGGGGCGGAGCCTA
 TGAAAAAACGCCAGCAACGCGGCCTTTTTACGGTTCCCTGGCCTTTTGCTGGCCTTTTGCTCAC
 ATGGCTCGAC

FIGURE 14B

GATCTTCAATATTGGCCATTAGCCATATTATTTCATTGGTTAATAAGCATAAATCAATATTGGCT
ATTGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAAT
ATGACCGCCATGTTGGCATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATT
AGTTCATAGCCCATATATGGAGTTCCGCGTTACATAAATTACGGTAAATGGCCCGCCTGGCTG
ACCGCCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTAAACGCCAAT
AGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACA
TCAAGTGTATCATATGCCAAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTG
GCATTATGCCAGTACATGACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTAGT
CATCGCTATTACCATGGTGATGCGGTTTTTGGCAGTACACCAATGGGCGTGGATAGCGGTTTTGA
CTCACGGGATTTCCAAGTCTCCACCCCATTTGACGTCAATGGGAGTTTTGTTTTGGCACCAAAA
TCAACGGGACTTTCCAAAATGTCGTAACTGCGATCGCCCGCCCCGTTGACGCAAAATGGG
CGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTGTAGTGAACCGTCAGATCA
CTGAATTCTGACGACCTACTGATTAAACGCCCATAGAGGCTCTCTGCAGATCACTAGAAGCTTT
ATTGCGGTAGTTTTATCACAGTTAAATGCTAACGCAGTCAGTGCTTCTGACACAACAGTCTCG
AACTTAAGCTGCAGTGACTCTCTTA AatccaocatggctacagGTGAGTACTCGCTACCTTAAGAGAGG
CCTATCTGGCCAGTTAGCAGTCGAAGAAAGAAAGTTAAGAGAGCCGAAACAAGCGCTCATGA
GCCCGAAGTGGCGAGCCCGATCTTCCCCATCGGTGATGTCGGCGATATAGGCGCCAGCAACC
GCACCTGTGGCGCCGGTGTATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGG
TGTGGTCCGCATGATCGCGTAGTCGATAGTGGCTCCAAAGTAGCGAAGCGAGCAGGACTGGGC
GGCGGCCAAAGCGGTCCGGACAGTGCTCCGAGAACGGGTGCGCATAGAAATTGCATCAACGCA
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GAGCATCACA AAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATA
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GCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAACCCG
CTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAA
GAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCACGTTAAGGG
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CTCCCCAGCAGGCAGAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAGGTGTGGAA
AGTCCCCAGGCTCCCCAGCAGGCAGAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACC
ATAGTCCCGCCCCCTAACTCCGCCCATCCCCGCCCTAACTCCGCCCAGTCCGCCCATTTCTCCG
CCCCATGGCTGACTAATTTTTTTTATTTATGCAGAGGCCGAGGCCGCTCGGCCTCTGAGCTA
TTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTTGCAAAAAGCTTGATTCTTCT
GACACAACAGTCTCGAACTTAAGGCTAGAGCCACCATGATTGAACAAGATGGATTGCACGCA
GGTCTCCGGCCGCTTGGGTGGAGGCTATTCGGCTATGACTGGGCACAACAGACAATCGG
CTGCTCTGATGCCGCCGTGTTCCGGCTGTGAGCGCAGGGGCGCCCGTTCTTTTTGTCAAGAC
CGACCTGTCCGGTGCCCTGAATGAACTGCAGGACAGGCGAGGCTATCGTGGCTGGCCA
CGACGGGCGTTCTTGGCAGCTGTGCTCGACGTTGTACTGAAGCGGGAAGGGACTGGCTG-

FIGURE 15A

CTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCATCTCACCTTGCTCCTGCCGAGAAAGTA
TCCATCATGGCTGATGCAATGCGGGGGCTGCATAACGCTTGATCCGGCTACCTGCCCATTCGAC
CACCAAGCGAAACATCGCATCGAGCGAGCACGTA CTGGATGGAAGCCGGTCTTGTCGATCA
GGATGATCTGGACGAAGAGCATCAGGGGGCTCGGGCCAGCCGAACTGTTCCGCCAGGCTCAAGG
CGCGCATGCCCGACGGCGAGGATCTCGTCTGTGACCCATGGCGATGCTGCTTGCCGAATATCA
TGGTGGAAAATGGCCGCTTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGACCGCT
ATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGGCGAATGGGCTGAC
CGCTTCCTCGTGCTTTACGGTATCGCCGCTCCCGATTGCGCAGCGCATCGCCTTCTATCGCCTTC
TTGACGAGGccaTTCTgatggaggtagCGGCCGCTAACCTGGTTGCTGACTAATTGAGATGCATGCTTT
GCATACTTCTGCCTGCTGGGGAGCCTGGGGACTTTCCACACCCTAACTGACACACATTCCACA
GCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGAAATTGTAAGCGTTAATATTTTGTAAAA
TTCCGCGTTAAATTTTGTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAAAATC
CCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTGTTCAGTTTGGAACAAGAG
TCCACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATG
GCCCCAC

FIGURE 15B

GATCTTCAATATTGGCCATTAGCCATATTATTTCATTGGTTATATAGCATAAATCAATATTGGCT
ATTGGCCATTGCATACGTTGTATCTATATCATAATATGTACATTTATATTGGCTCATGTCCAAT
ATGACCGCCATGTTGGCATTGATTATTGACTAGTTATTAATAGTAATCAATTACGGGGTCATT
AGTTTCATAGCCCATATATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCCGCTGGCTG
ACCGCCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTAACGCCAAT
AGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCCACTTGGCAGTACA
TCAAGTGTATCATATGCCAAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCGCGCTG
GCATTATGCCAGTACATGACCTTACGGGACTTCTCTACTTGGCAGTACATCTACGTATTAGT
CATCGCTATTACCATGGTGATGCGGTTTTTGGCAGTACACCAATGGGCGTGGATAGCGGTTTGA
CTCACGGGGATTTCCAAAGTCTCCACCCCAATTGACGTCAATGGGAGTTTGTTTTGGCACCAAAA
TCAACGGGACTTTCCAAAATGTCGTAACAACTGCGATCGCCCGCCCCGTTGACGCAAAATGGG
CGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCggttagtgaaccgtCAGATCACTAGAA
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TCTCGAACTTAAGCTGCAGTGACTCTCTTAAatocacatggctacagGTGAGTACTCGCTACCTTAAG
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CATGAGCCCGAAGTGGCGAGCCCGATCTTCCCCATCGGTGATGTCGGCGATATAGGCGCCAG
CAACCGCACTGTGGCGCCGGTGTATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGG
ACGGGTGTGGTCGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGAC
TGGGCGGCGGCCAAAAGCGGTCCGACAGTGTCCGAGAACGGGTGCGCATAGAAATTGCATCA
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CCTGACGAGCATCAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATA
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TACCGGATACCTGTCCGCCCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCACGCTGT
AGGTATCTCAGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCGCTT
CAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGAC
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CGCTCTGTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAAACAAA
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TAAGGGATTTTGGTTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTatcggtgtgaaataccg
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GAAAGTCCCCAGGCTCCCCAGCAGGAGAAATGCAAAGCATGCATCTCAATTAGTCAGCA
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CTATTCCAGAAGTAGTGAGGAGGCTTTTTTGGAGGCCTAGGCTTTTGCAAAAAGCTTGATTCT
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CGGCTGCTCTGATGCCGCCGTGTTCCGGCTGTGACGCGAGGGGCGCCGGTTCTTTTGTCAA
GACCGACCTGTCCGGTGCCTGAATGAACTGCAGGACGAGGCAGCGCGGCTATCGTGGCTGG
CCACGACGGGCGTTCTTTCGCGCAGCTGTGCTCGACGTTGTCACTGAAGCGGGAAGGGACTGG
CTGCTATTGGGCGAAGTGCCGGGGCAGGATCTCCTGTCTCTCACCTTGCTCCTGCCGAGAAA-

Figure 16A

GTATCCATCATGGCTGATGCAATGCGGCGGCTGCATACGCTTGATCCGGCTACCTGCCCATTC
GACCACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGATGGAAGCCGGTCTTGTCGA
TCAGGATGATCTGGACGAAGAGCATCAGGGGCTCGCGCCAGCCGAACCTGTTCCGCCAGGCTCA
AGGCGCGCATGCCCGACGGCGAGGATCTCGTCTGTGAACCATGGCGATGCTTGTGCGGAAT
ATCATGGTGGAAAATGGCCGCTTTCTGGATTTCATCGACTGTGGCCGGCTGGGTGTGGCGGAC
CGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGCGAATGGGC
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CGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 16B

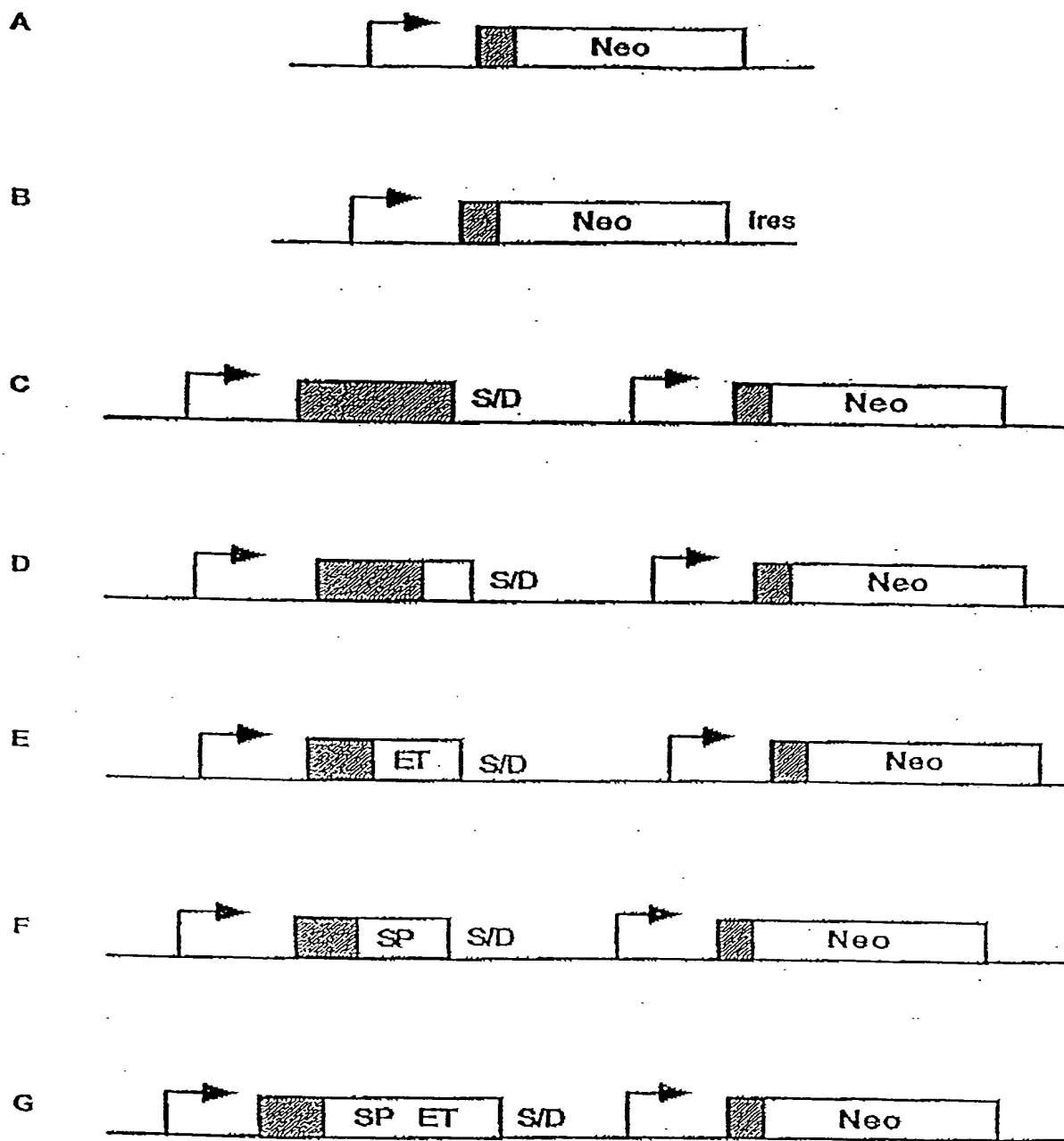


Figure 17

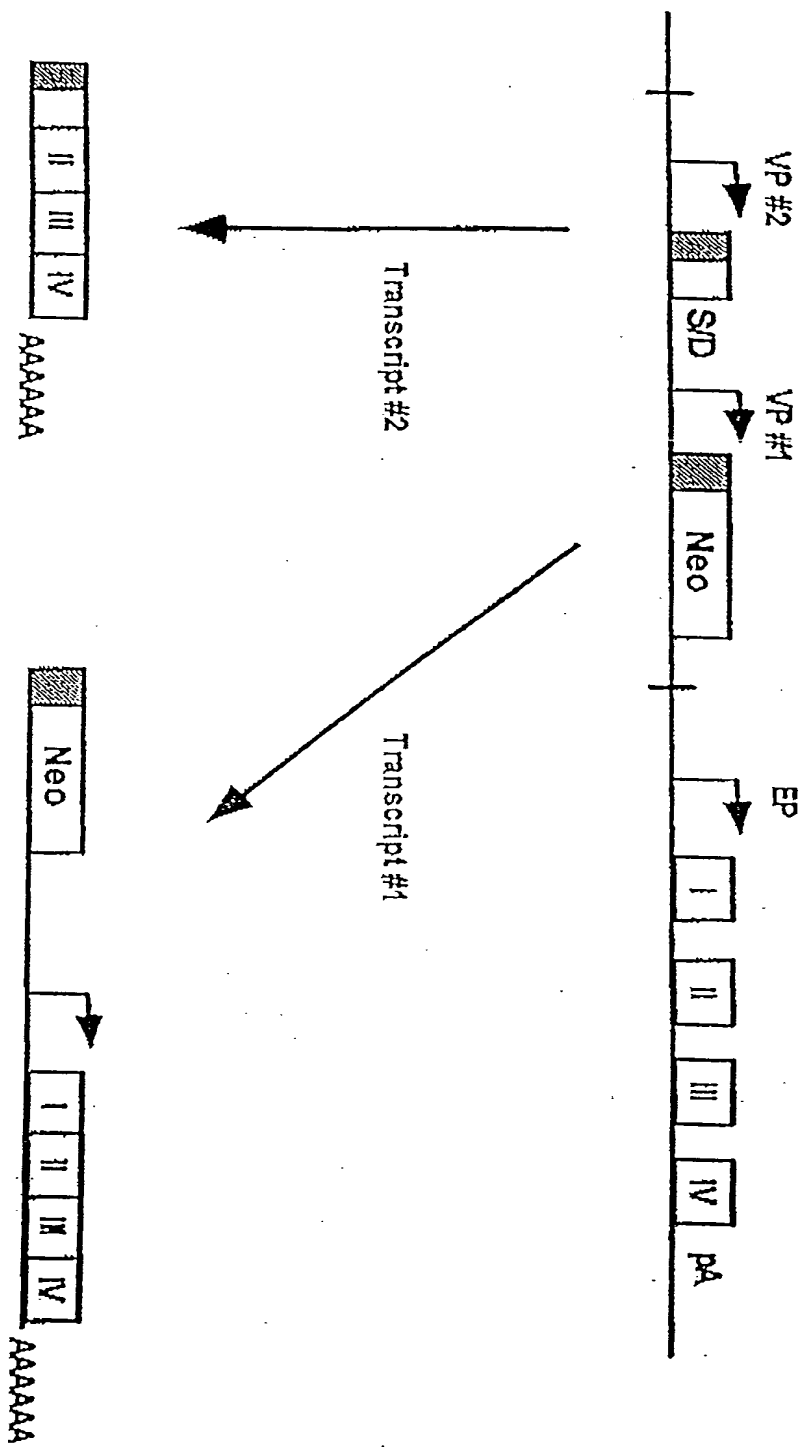


Figure 18



Figure 19

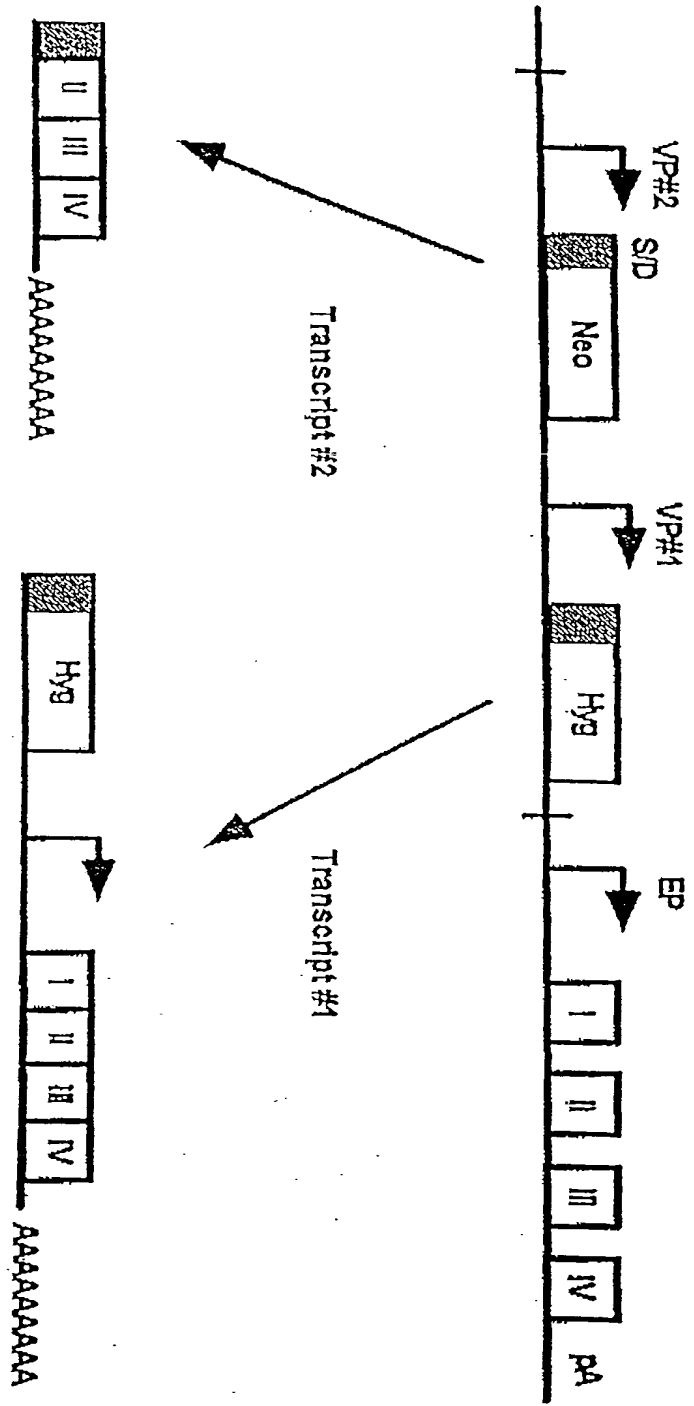


Figure 20A

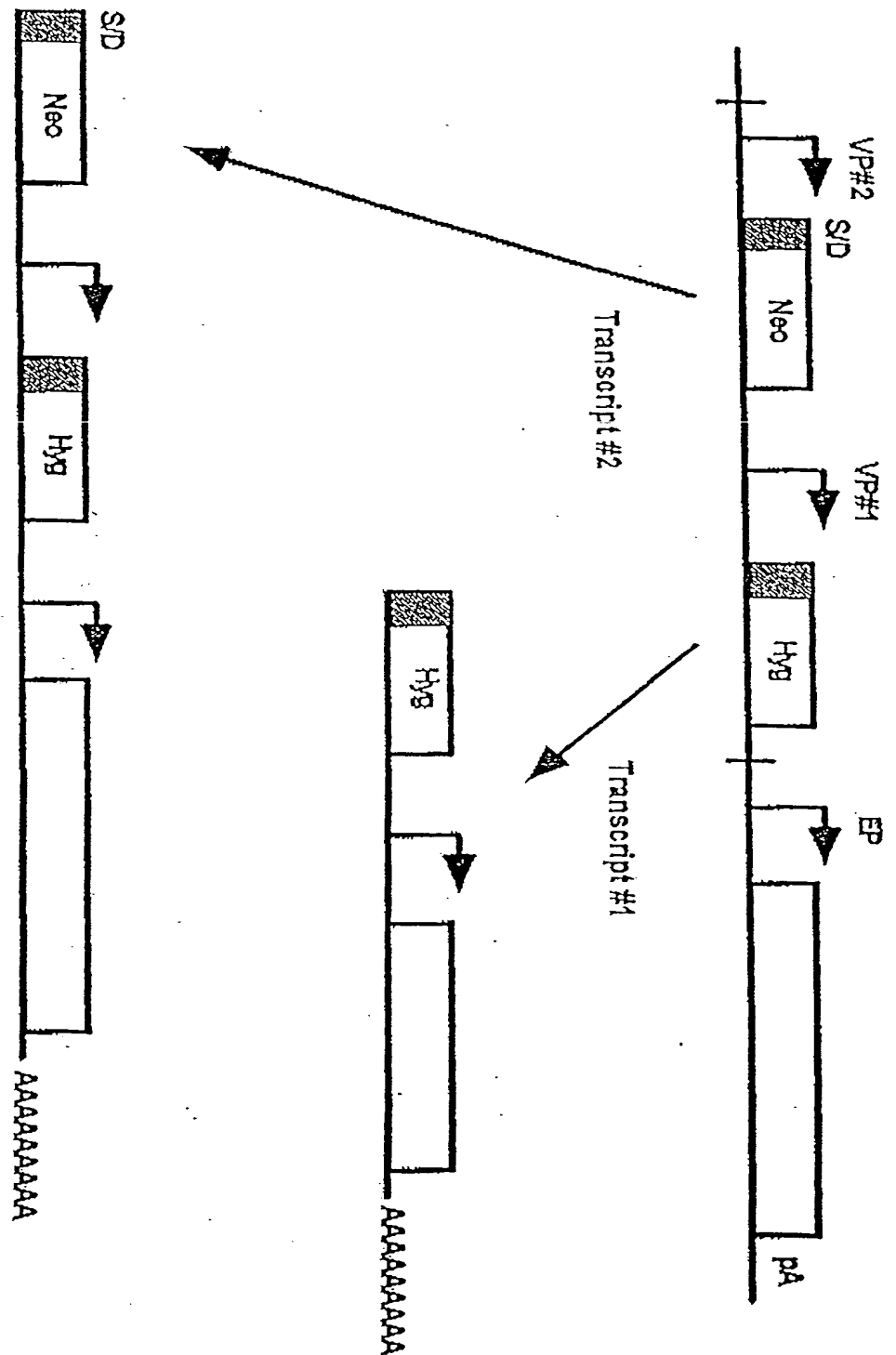


Figure 20B

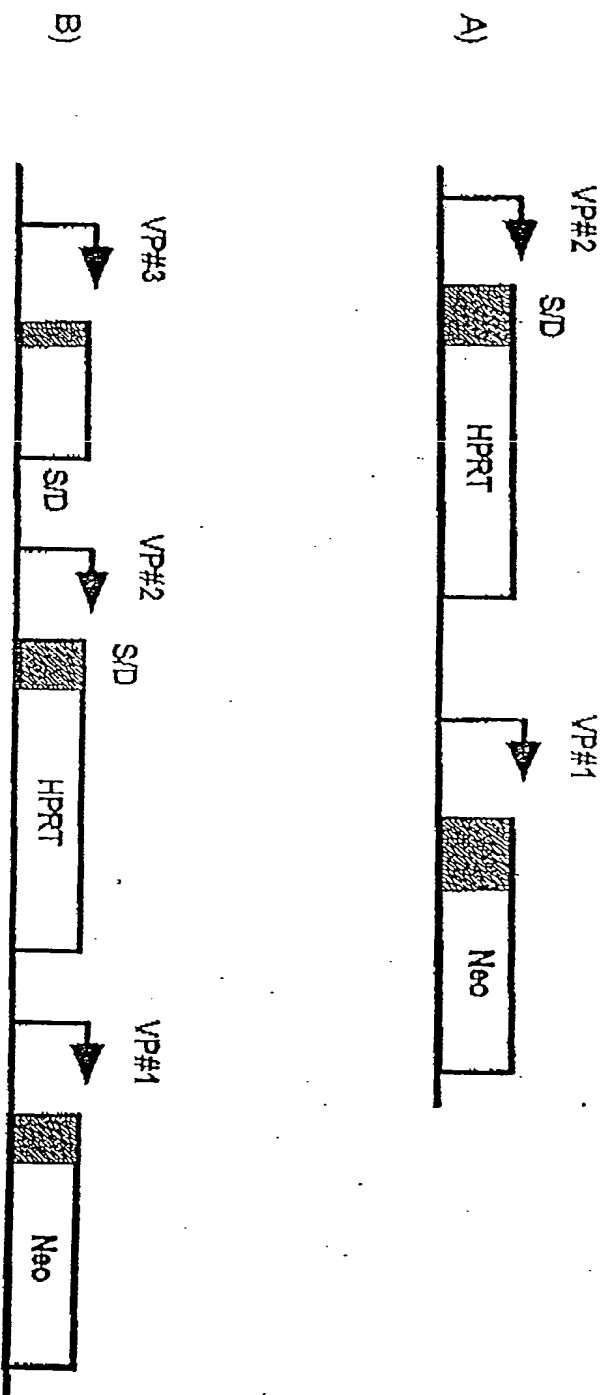


Figure 21

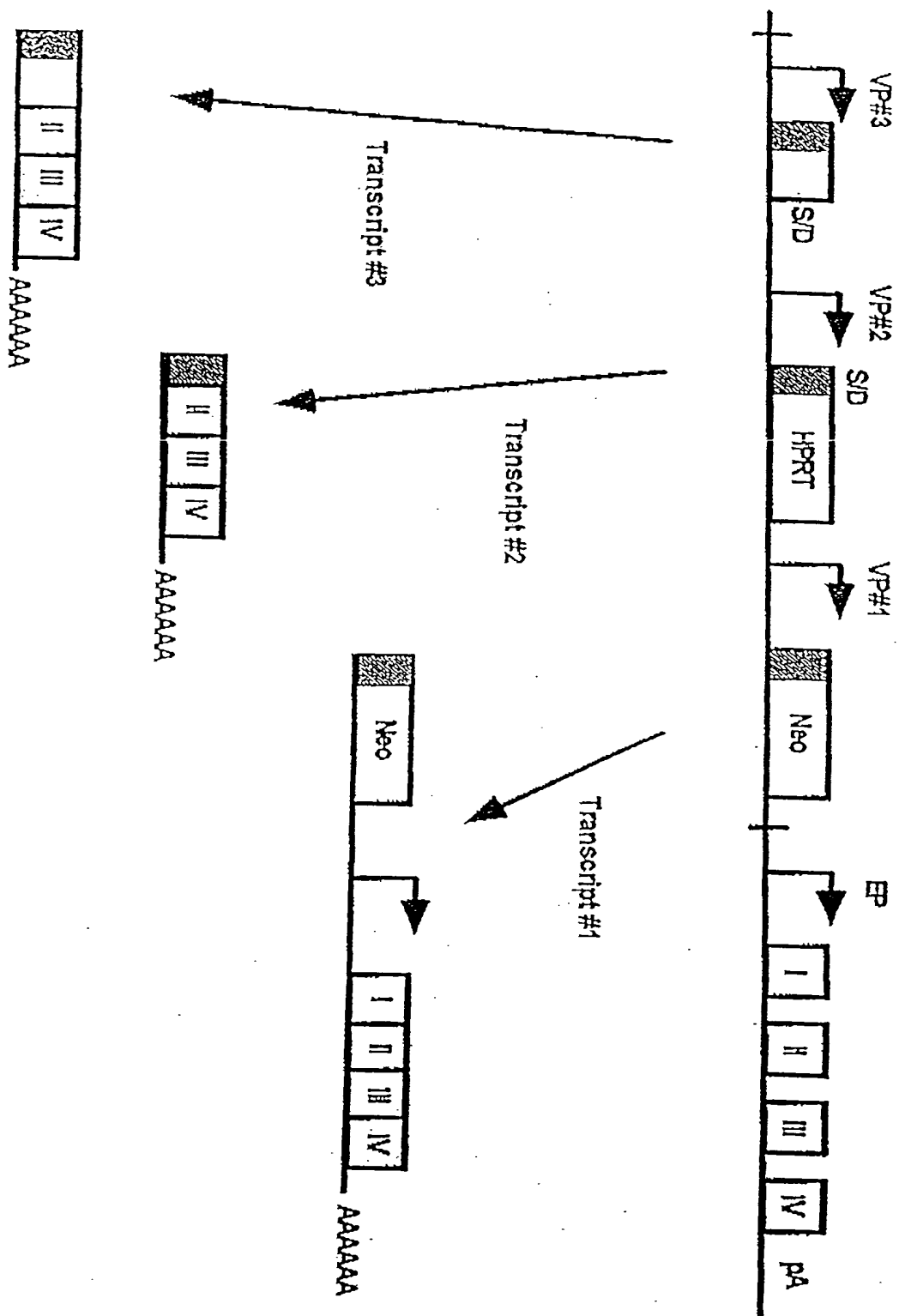
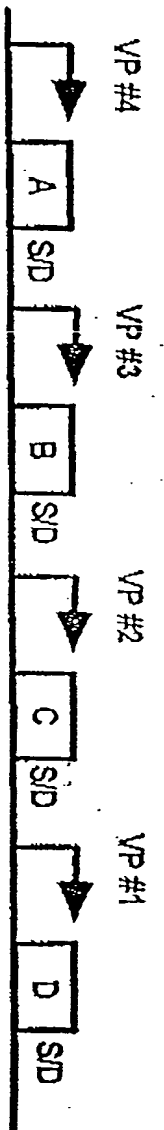


Figure 22



A) Exon A and Flanking Intron

5' UTR	ACCACAGGTGATG	Vector Intron
--------	---------------	---------------

B) Exon B and Flanking Intron

5' UTR	ACCATGCAGGTGATG	Vector Intron
--------	-----------------	---------------

C) Exon C and Flanking Intron

5' UTR	ACCATGCAGGTGATG	Vector Intron
--------	-----------------	---------------

D) Exon D and Flanking Intron

5' UTR	ACCATGGGCAGGTGATG	Vector Intron
--------	-------------------	---------------

Figure 23

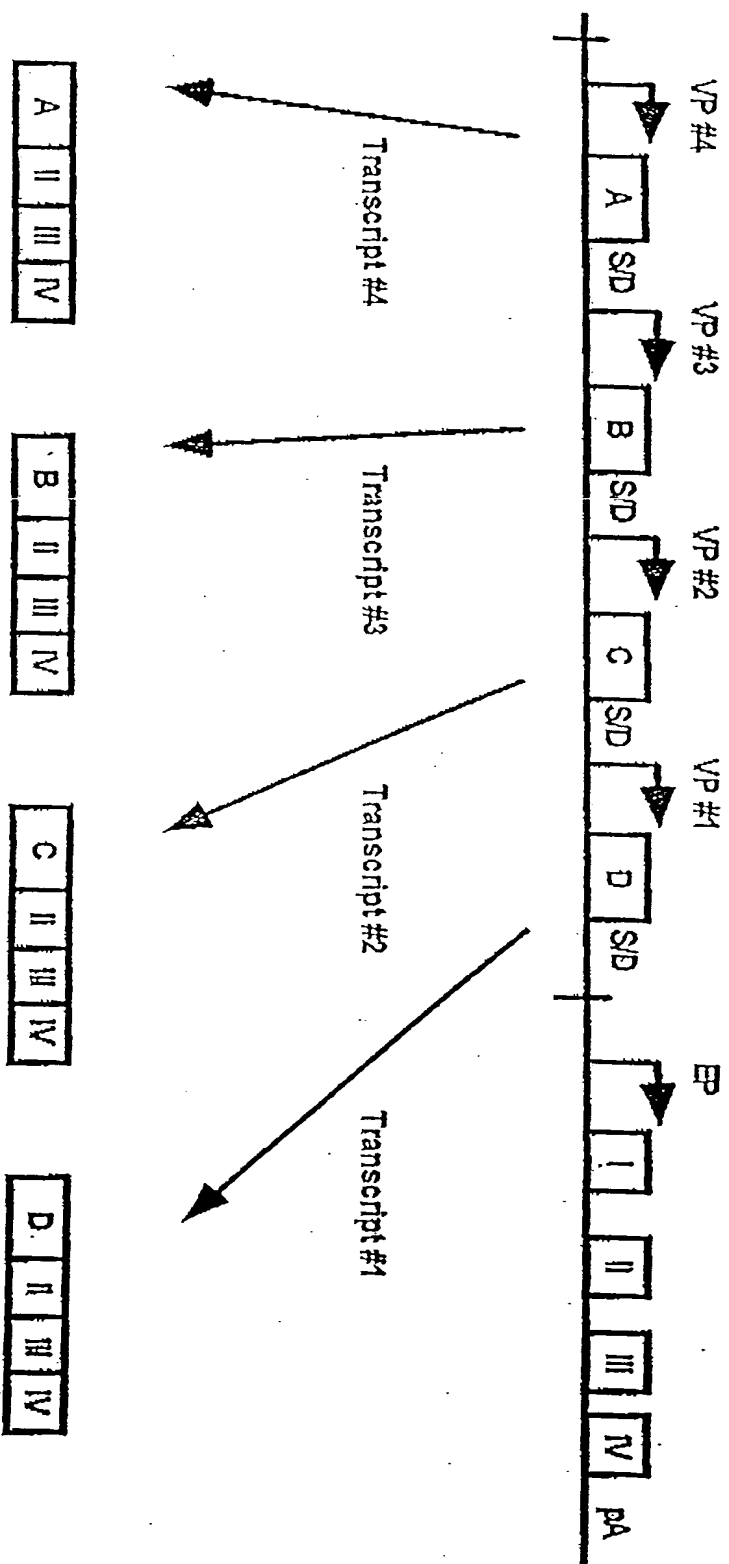


Figure 24

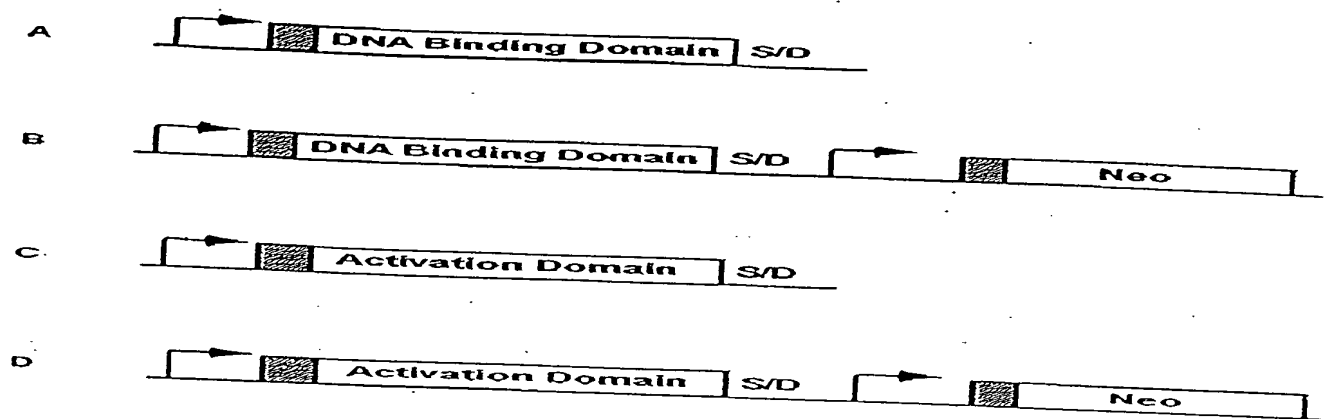


FIGURE 25

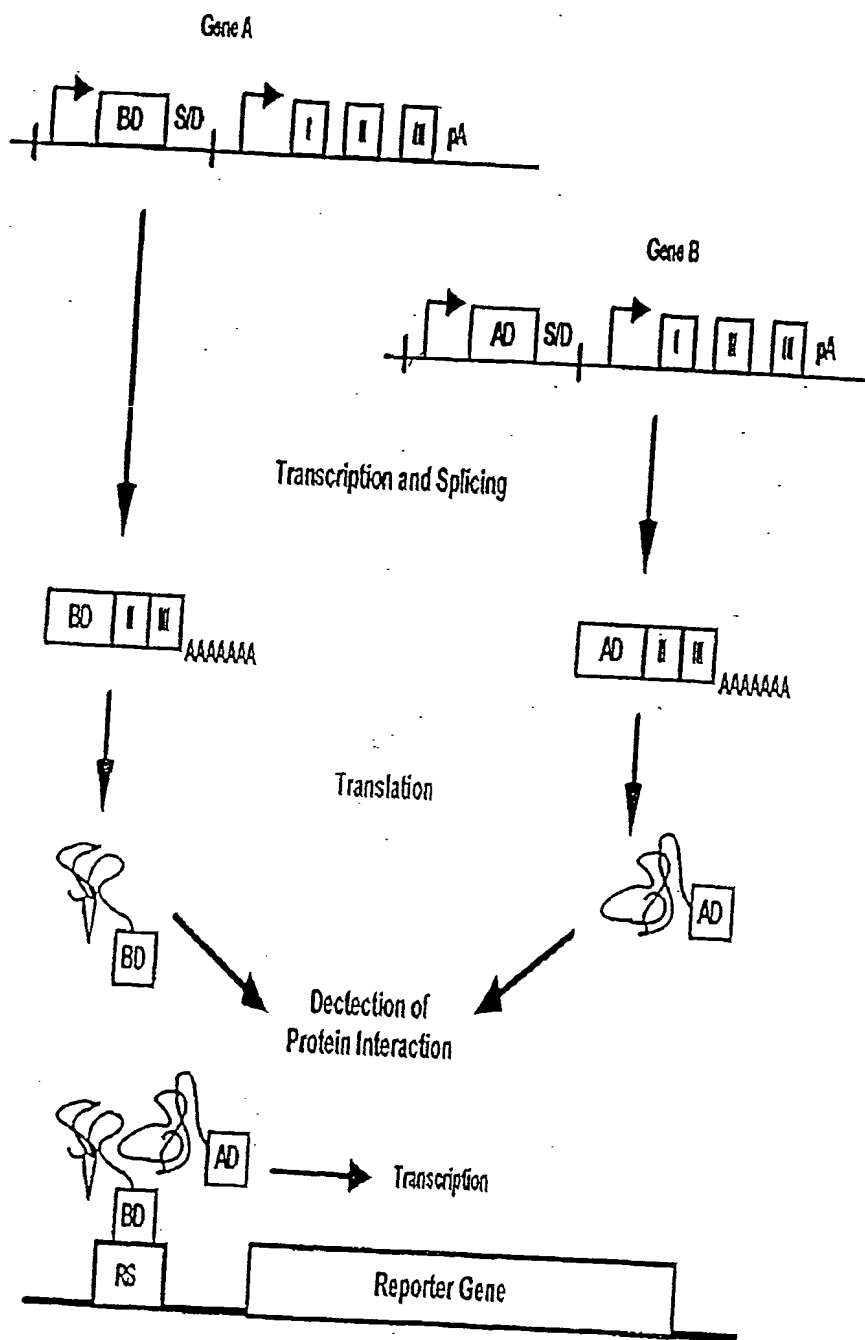


Figure 26

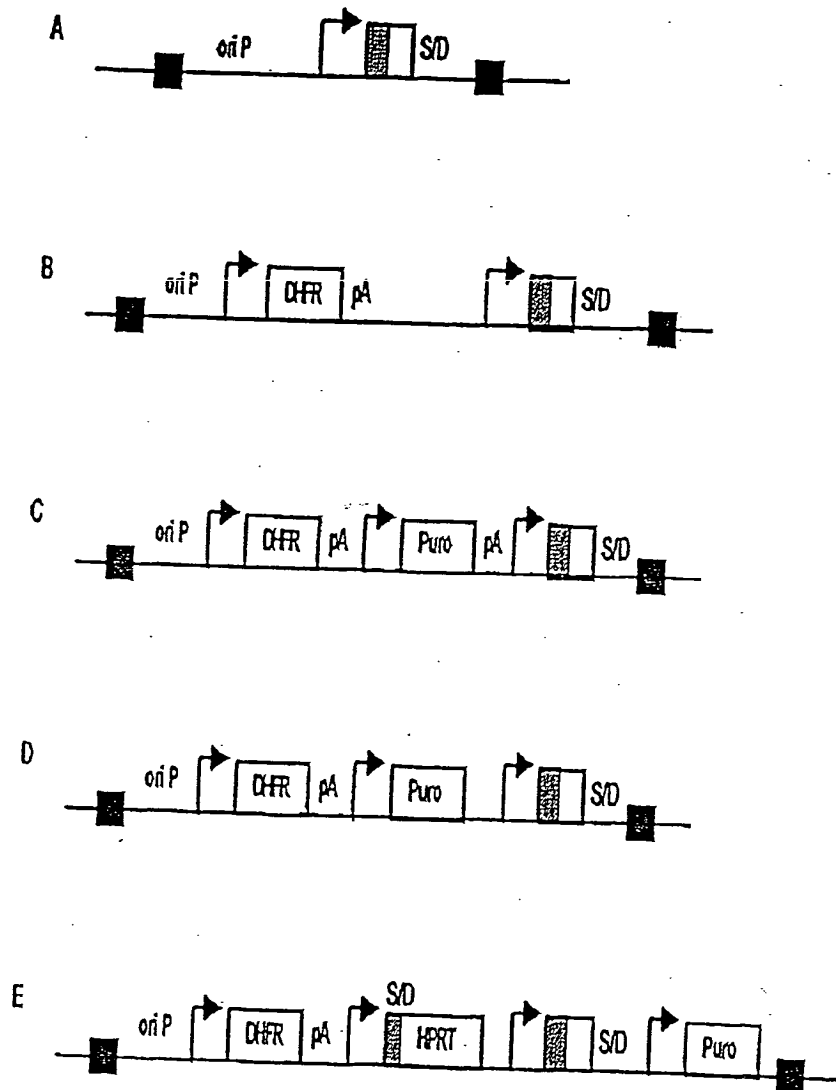


FIGURE 27

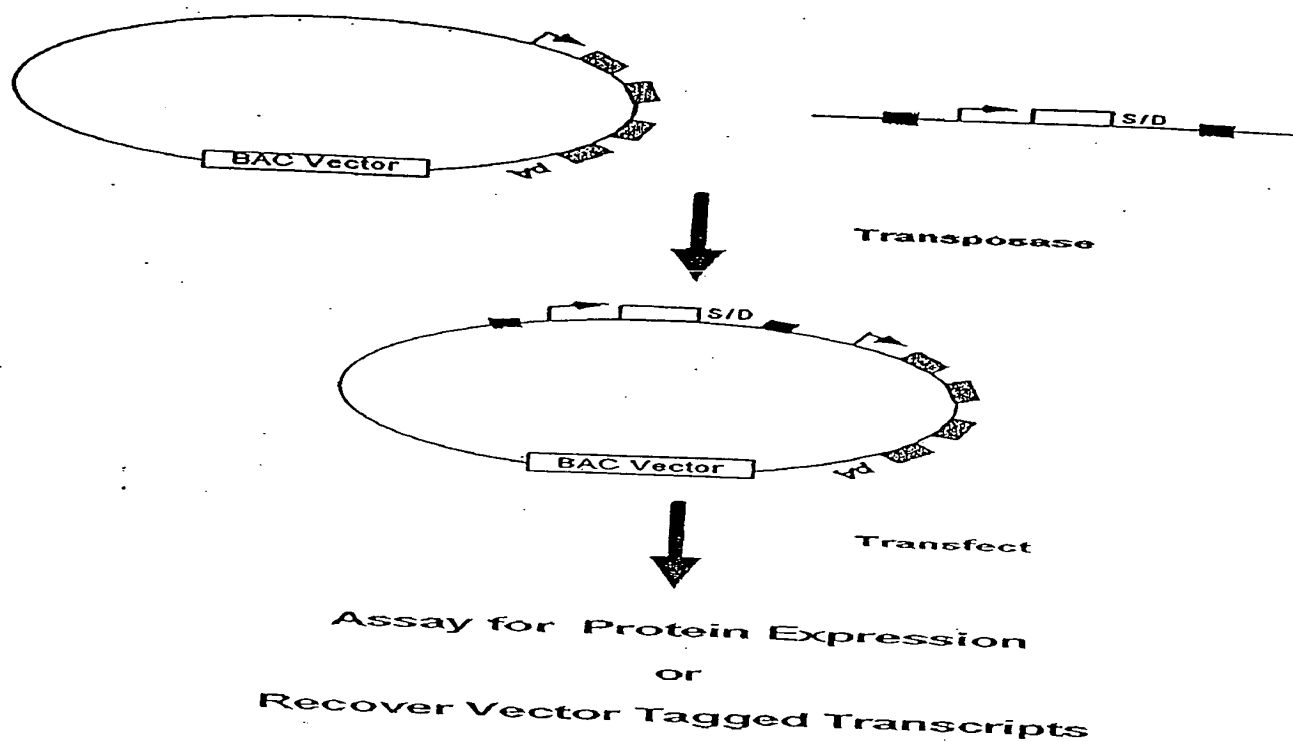


FIGURE 28

CACCTAAATTGTAAGCGTTAATATTTTGTAAAATTCGCGTTAAATTTTTGT
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CAAGAGTCCACTATTAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAA
CCGTCTATCAGGGCGATGGCCACTACGTGAACCATCACCTAATCAAGTT
TTTTGGGGTCGAGGTGCCGTAAAGCACTAAATCGGAACCCTAAAGGGAGC
CCCCGATTTAGAGCTTGACGGGGAAAGCCGGCGAACGTGGCGAGAAAGGA
AGGGAAGAAAGCGAAAGGAGCGGGCGCTAGGGCGCTGGCAAGTGTAAGCG
GTCACGCTGCGCGTAACCACCACACCCGCCGCGCTTAATGCGCCGCTACAG
GGCGCGTCCCATTGCGCATTCAGGCTGCGCAACTGTTGGGAAGGGCGATC
GGTGCGGGCCTCTTCGCTATTACGCCAGCTGGCGAAAGGGGGATGTGCTG
CAAGGCGATTAAGTTGGGTAACGCCAGGGTTTTCCAGTCACGACGTTGTA
AAACGACGGCCAGTGAATTGTAATACGACTCACTATAGGGCGAATTGGGT
Acaattcaattcgtagacctcgaaattctaccgggtaggggaggcgcttttccaaggcagtcctggagcatgcgcttag
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CCCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAG
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ATCGCTATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGA
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GAGAGCCGAAACAAGCGCTCATGAGCCCGAAGTGCGGAGCCCGATCTTCC
CCATCGGTGATGTGCGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCC-

FIGURE 29A

GGTGATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGGTG
TGGTCGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGC
AGGACTGGGCGGCGGCCAAAGCGGTCCGACAGTGCTCCGAGAACGGGTGC
GCATAGAAATTGCATCAACGCATATAGCGCTAGATCCTTGCTAGAGTCGAG
GCCGCCACCGCGGTGGAGCTCCAGCTTTTGTTCCTTTAGTGAGGGTTAAT
TTCGAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTGTGAAATTGTTA
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CCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTGCGTTGCGCTCAC
TGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTGCATTAATGAATCG
GCCAACGCGCGGGGAGAGGCGGTTTGCCTATTGGGCGCTCTTCCGCTTCCT
CGCTCACTGACTCGCTGCGCTCGGTCTCGGCTGCGGCGAGCGGTATCAG
CTCACTCAAAGGCGGTAATACGGTTATCCACAGAATCAGGGGATAACGCA
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GCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTT
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TAGGGGTTCCGCGCACATTTCCCCGAAAAGTGC

Figure 29B

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
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CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
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ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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Figure 30A

agcccgctcctacctgcaatatcaggggtgactgtgtgcagctttagcagtaggagtagattgcctccctggttccacctatg
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CTGCCGCTTACCGGATACCTGTCCGCCTTTCTCCCTTCGGGAAGCGTGGCG
CTTTCTCATAGCTCACGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCT
CCAAGCTGGGCTGTGTGCACGAACCCCCGTTTCAGCCCGACCGCTGCGCCT
TATCCGGTAACTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGC
CACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC
GGTGCTACAGAGTTCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAG
GACAGTATTTGGTATCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG
AGTTGGTAGCTCTTGATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTT-

FIGURE 30B

TTTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACCTCA
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC
CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCAT
CAGGAAATTGTAAGCGTTAATAATTGAGAAAGTCTGTCAGAAAGGCGAT
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GCGAACAGTTCGGCTGGCGCGAGCCCTGATGCTCTTCGTCCAGATCATCC
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TTCGCTTGGTGGTTCGAATGGGCAGGTAGCCGGATCAAGCGTATGCAGCCG
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CCGCTTCAGTGACAACGTGAGCACAGCTGCGCAAGGAACGCCCGTCGTG
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GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 30C

GATCTTCAATATTGGCCATTAGCCATATTATTCAATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
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GGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTGAATTCTG
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Figure 31A

TTTTTGTGGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA
GATCCTTTGATCTTTTCTACGGGGTCTGACGCTCAGTGGAACGAAAACTCA
CGTTAAGGGATTTTGGTCATGAGATTATCAAAAAGGATCTTCACCTAGATC
CTTTTATCGGTGTGAAATACCGCACAGATGCGTAAGGAGAAAAATACCGCAT
CAGGAAATTGTAAGCGTTAATAATTCAGAAGAACTCGTCAAGAAGGCGAT
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AACGCTATGTCCTGATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATG
AATCCAGAAAAGCGGCCATTTTCCACCATGATATTTCGGCAAGCAGGCATCG
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GCGAACAGTTCGGCTGGCGCGAGCCCCTGATGCTCTTCGTCCAGATCATCC
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GCCGAAATCGGCAAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGG
GTTGAGTGTTGTTCCAGTTTGGAAACAAGAGTCCACTATTAAGAACGTGGA
CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCCAC

FIGURE 31C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCGCCCATTTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
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Figure 32A

atggaggtagtaagacctccctttacaacctaaggcgaggaactgcccttgctattccacaatgtcgtcttacaccattgagt
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GCATATAGCGCTAGATCCTTGCTAGAGTCGAGATCTGTGAGCCATGTGAG
CAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAAGGCCGCGTTGCTGGCG
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AGTCAGAGGTGGCGAAACCCGACAGGACTATAAAGATACCAGGCGTTTCC
CCCTGGAAGCTCCCTCGTGCGCTCTCCTGTTCCGACCCTGCCGCTTACCGG
ATACCTGTCCGCTTTCTCCCTTCGGGAAGCGTGGCGCTTTCTCATAGCTCA
CGCTGTAGGTATCTCAGTTCGGTGTAGGTGCTTCGCTCCAAGCTGGGCTGT
GTGCACGAACCCCCCGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACAT
CGTCTTGAGTCCAACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCC
ACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGT-

FIGURE 32B

TCTTGAAGTGGTGGCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTA
TCTGCGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTT
GATCCGGCAAACAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGC
AGCAGATTACGCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTT
CTACGGGGTCTGACGCTCAGTGGAACGAAAACTCACGTTAAGGGATTTTG
GTCATGAGATTATCAAAAAGGATCTTCACCTAGATCCTTTTATCGGTGTGA
AATACCGCACAGATGCGTAAGGAGAAAAATACCGCATCAGGAAATTGTAAG
CGTTAATAATTGAGAAGAACTCGTCAAGAAGGCGATAGAAGGCGATGCGC
TGCGAATCGGGAGCGGCGATACCGTAAAGCACGAGGAAGCGGTCAGCCCA
TTCGCCGCCAAGCTCTTCAGCAATATCACGGGTAGCCAACGCTATGTCCTG
ATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATGAATCCAGAAAAGC
GGCCATTTTCCACCATGATATTCGGCAAGCAGGCATCGCCATGGGTCACGA
CGAGATCCTCGCCGTGGGGCATGCTCGCCTTGAGCCTGGCGAACAGTTCCG
CTGGCGCGAGCCCCCTGATGCTCTTCGTCCAGATCATCCTGATCGACAAGAC
CGGCTTCCATCCGAGTACGTGCTCGCTCGATGCGATGTTTCGCTTGGTGGT
CGAATGGGCAGGTAGCCGGATCAAGCGTATGCAGCCGCCGCATTGCATCA
GCCATGATGGATACTTTCTCGGCAGGAGCAAGGTGAGATGACAGGAGATC
CTGCCCCGGCACTTCGCCCAATAGCAGCCAGTCCCTTCCCGCTTCAGTGAC
AACGTGAGCACAGCTGCGCAAGGAACGCCCGTCGTGGCCAGCCACGATA
GCCGCGCTGCCTCGTCTTGACGTTTCATTACAGGGCACCGGACAGGTCCGTCT
TGACAAAAAGAACCAGGGCGCCCCCTGCGCTGACAGCCGGAACACGGCGGCA
TCAGAGCAGCCGATTGTCTGTTGTGCCAGTCATAGCCGAATAGCCTCTCC
ACCCAAGCGGCCGGAGAACCTGCGTGCAATCCATCTTGTTCAATCATGCGA
AACGATCCTCATCCTGTCTCTTGATCAGAGCTTGATCCCCTGCGCCATCAG
ATCCTTGCGCGCGAGAAAGCCATCCAGTTTACTTTGCAGGGCTTGTC AAC
TTACCAGATAAAAGTGCTCATCATTTGGA AAAcattcaattcgtcgacctcgaaattctaccggg
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GACTAATTGAGATGCATGCTTTGCATACTTCTGCCTGCTGGGGAGCCTGGG
GACTTTCCACACCCTAACTGACACACATTCCACAGCTGGTTCTTTCCGCCTC
AGAAGGTACACAGGCGAAAATTGTAAGCGTTAATATTTTGTAAAATTTCGCG
TTAAATTTTTGTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGC
AAAATCCCTTATAAATCAAAAGAATAGACCGAGATAGGGTTGAGTGTTGTT
CCAGTTTGGAACAAGAGTCCACTATTAAGAACGTGGACTCCAACGTCAAA
GGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

FIGURE 32C

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
CCCAACGACCCCGCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
ACTGCCCACTTGGCAGTACATCAAGTGTATCATATGCCAAGTCCGCCCCCT
ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
ACCTTACGGGACTTTCTACTTGGCAGTACATCTACGTATTAGTCATCGCT
ATTACCATGGTGATGCGGTTTTGGCAGTACACCAATGGGCGTGGATAGCG
GTTTGACTCACGGGGATTTCGAAGTCTCCACCCATTGACGTCAATGGGAG
TTTGT TTTGGCACCAAAATCAACGGGACTTTCCAAAATGTCGTAACAAC TG
CGATCGCCCGCCCGTGTGACGCAATGGGCGGTAGGCGTGTACGGTGGGA
GGTCTATATAAGCAGAGCTCGTTTAGTGAACCGTCAGATCACTGAATTCTG
ACGACCTACTGATTAACGGCCAGATCTAAGCTAGCTTCCTGAAAGATGAAG
CTACTGTCTTCTATCGAACAAGCATGCGATATTTGCCGACTTAAAAAGCTC
AAGTGCTCCAAAGAAAAACCGAAGTGCGCCAAGTGTCTGAAGAACAAC TG
GGAGTGTGCTACTCTCCCAAAACCAAAAGGTCTCCGCTGACTAGGGCACA
TCTGACAGAAGTGGAATCAAGGCTAGAAAGACTGGAACAGCTATTTCTACT
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FIGURE 33A

aactgactgaaatgcctcaaaatgttctttacgatgccattgggatatatcaacgggtggtatataccagtgattttttctccattt
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GAGAACGGGTGCGCATAGAAATTGCATCAACGCATATAGCGCTAGATCCT
TGCTAGAGTCGAGATCTGTGCGAGCCATGTGAGCAAAAGGCCAGCAAAAGG
CCAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCC
CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC
CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGTG
CGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTCTCC
CTTCGGGAAGCGTGCGCTTTCTCATAGCTCACGCTGTAGGTATCTCAGT-

FIGURE 33B

TCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCCCGTT
CAGCCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCAACCCG
GTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGGATTAG
CAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTGGCCTA
ACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGCTGAAGC
CAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAACAAACCA
CCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTACGCGCAGAA
AAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGTCTGACGCTC
AGTGAACGAAAACTCACGTTAAGGGATTTTGGTCATGAGATTATCAAAA
AGGATCTTCACCTAGATCCTTTTATCGGTGTGAAATACCGCACAGATGCGT
AAGGAGAAAAATACCGCATCAGGAAATTGTAAGCGTTAATAATTGAGAAGA
ACTCGTCAAGAAGGCGATAGAAGGCGATGCGCTGCGAATCGGGAGCGGCG
ATACCGTAAAGCACGAGGAAGCGGTACGCCATTTCGCCGCCAAGCTCTTCA
GCAATATCACGGGTAGCCAACGCTATGTCTGATAGCGGTCCGCCACACCC
AGCCGGCCACAGTCGATGAATCCAGAAAAGCGGCCATTTTCCACCATGATA
TTCGGCAAGCAGGCATCGCCATGGGTACGACGAGATCCTCGCCGTCGGG
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CTCTTCGTCCAGATCATCCTGATCGACAAGACCGGCTTCCATCCGAGTACG
TGCTCGCTCGATGCGATGTTTCGCTTGGTGGTCGAATGGGCAGGTAGCCGG
ATCAAGCGTATGCAGCCGCCGATTGCATCAGCCATGATGGATACTTTCTC
GGCAGGAGCAAGGTGAGATGACAGGAGATCCTGCCCCGGCACTTCGCCCA
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AAGGAACGCCCCGTCGTGGCCAGCCACGATAGCCGCGCTGCCTCGTCTTGCA
GTTCAATCAGGGCACCGGACAGGTCGGTCTTGACAAAAAGAACCGGGCGC
CCCTGCGCTGACAGCCGGAACACGGCGGCATCAGAGCAGCCGATTGTCTG
TTGTGCCCAGTCATAGCCGAATAGCCTCTCCACCCAAGCGGCCGGAGAACC
TGCGTGCAATCCATCTTGTTCAATCATGCGAAACGATCCTCATCCTGTCTCT
TGATCAGAGCTTGATCCCCTGCGCCATCAGATCCTTGCGCGCGAGAAAGCC
ATCCAGTTTACTTTGCAGGGCTTGTCAACCTTACCAGATAAAAGTGCTCAT
CATTGGAACAcattcaattcgtcgacctcgaaattctaccggtaggggaggcgcttttcccaaggcagctctgga
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cctgacgccccgcccacgaccgagcgcccagccgaaaggagcgacgaccccatgcatcgatggcactgggcagg
taagtatcaaggtagcGGCCGCTAACCTGGTTGCTGACTAATTGAGATGCATGCTTT
GCATACTTCTGCCTGCTGGGGAGCCTGGGGACTTTCCACACCCTAACTGAC
ACACATTCCACAGCTGGTTCTTTCCGCCTCAGAAGGTACACAGGCGAAATT
GTAAGCGTTAATATTTTGTAAATTCGCGTTAAATTTTGTAAATCAGC-

Figure 33C

TCATTTTTTAACCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAA
GAATAGACCGAGATAGGGTTGAGTGTTGTTCCAGTTTGGAACAAGAGTCC
ACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATC
AGGGCGATGGCCAC

FIGURE 33D

tcaacgacaggagcacgatcatgcgacccgtggccaggacccaacgctgcccagatgcccgcgtgcccgtgctgg
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cttggagtggtaaatccgttagcgaggtgccgcccgttccattcagggtcgaggtggcccggctccatgcaccgcgacg
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Figure 34A

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Figure 34B

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
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CATTTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCCGCCTGGCTGACCG
CCCAACGACCCCCGCCCATTGACGTCAATAATGACGTATGTTCCCATAGTA
ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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CGGTGATGTCGGCGATATAGGCGCCAGCAACCGCACCTGTGGCGCCGGTG
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CGCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGA
CTGGGCGGGCGGCCAAAGCGGTCTGGACAGTGCTCCGAGAACGGGTGCGCAT
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FIGURE 35A

ggcttgcacaaaagaaccgggcccctgcgctgacagccggaacacggcggcatcagagcagccgattgtctgtgt
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GCGGAAAGAACCAGCTGTGGAATGTGTGTCAGTTAGGGTGTGGAAAGTCC
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GCAACCAGGTGTGGAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCA
AAGCATGCATCTCAATTAGTCAGCAACCATAGTCCCGCCCCCTAACTCCGCC
CATCCCGCCCCCTAACTCCGCCAGTTCCGCCCATTTCTCCGCCCATGGCTG
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CTGTCACTCACCTTGCTCCTGCCGAGAAAGTATCCATCATGGCTGATGCA
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AAATTTTTGTAAATCAGCTCATTTTTTAACCAATAGGCCGAAATCGGCAA
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Figure 35B

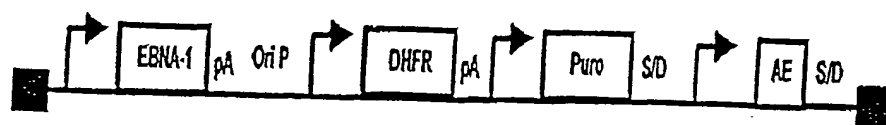


FIGURE 36

GATCTTCAATATTGGCCATTAGCCATATTATTCATTGGTTATATAGCATAAA
TCAATATTGGCTATTGGCCATTGCATACGTTGTATCTATATCATAATATGTA
CATTATATTGGCTCATGTCCAATATGACCGCCATGTTGGCATTGATTATTG
ACTAGTTATTAATAGTAATCAATTACGGGGTCATTAGTTCATAGCCCATAT
ATGGAGTTCCGCGTTACATAACTTACGGTAAATGGCCCGCCTGGCTGACCG
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ACGCCAATAGGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAA
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ATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCCCAGTACATG
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FIGURE 37A

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Figure 37B

TTTTGTGTTGCAAGCAGCAGATTACGCGCAGAAAAAAGGATCTCAAGAA
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 CAGGAAATTGTAAGCGTTAATAATTCAAGAAGAACTCGTCAAGAAGGCGAT
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 AACGCTATGTCCTGATAGCGGTCCGCCACACCCAGCCGGCCACAGTCGATG
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 GTTAAAATTTCGCGTTAAATTTTGTAAATCAGCTCATTTTTTAACCAATAG
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 GTTGAGTGTGTTCCAGTTTGAACAAGAGTCCACTATTAAAGAACGTGGA
 CTCCAACGTCAAAGGGCGAAAAACCGTCTATCAGGGCGATGGCCAC

Figure 37C